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A look at the sports: referees and officials in Germany.

Sport Development Report for Germany 2020-2022 - Part 2



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1 Introduction



Since the seventh wave of the Sport Development Report for Germany, systematic information on positions and roles and thus also on people in sports clubs in Germany has been available for the first time. Up to and including the sixth wave, the Sport Development Report was a purely organisational survey (the only exception being the subsequently expanded perspective on referees and officials in the sixth wave; cf. Breuer & Giel, 2017). It is now a combined organisational and individual (stakeholder) survey. This makes it much easier to provide both knowledge for controlling organised sport and for evaluating its function as a common good (knowledge of action and argumentation). The organisational surveys regularly showed that the problems of retaining and recruiting volunteer officials, referees and officials as well as coaches and trainers were central and have increased in importance (e.g. Breuer & Feiler, 2017a; 2017b). However, in order to keep sports clubs viable and thus support their services to the common good, a fundamental understanding is required as to why these groups contribute their knowledge, time and material resources to the sports club and to what extent they achieve their associated goals (cf. the model viable sports organisations; Breuer, 2007). In the seventh wave of the Sport Development Report, coaches and trainers (Breuer & Feiler, 2020a) and board members (Breuer & Feiler, 2020b) were also surveyed in this context in addition to the club survey.

In this volume, the results of the situation of referees and officials are presented differentiated according to individual sports. The last survey of referees and officials was also carried out as part of the Sport Development Report in 2016. A total of six sports or professional associations were involved in the survey at that time (cf. Breuer & Giel, 2017). 7,391 referees and officials from 18 sports and professional associations took part in this eighth wave of the sports development report¹. Due to the different participation of professional associations and the resulting different sport-related compositions of the random samples in both waves, a systematic comparison of both waves is not carried out in this report. Individual partial results of the current survey have already been published in the federal report (Part 1 of the Sport Development Report 2020-2022) (cf. Breuer & Feiler, 2021).

In contrast to the organisational survey, the representativeness of the examination of the referees and officials cannot yet be adequately assessed yet. The reason for this is that structural characteristics of the population of referees and officials are not known. In this respect, the study has an exploratory character. At the same time, when interpreting the findings, it should be taken into account that methodological artefacts (e.g. a selection bias²) cannot be completely ruled out.

1 Details on participation and the equal weighting of the professional associations involved can be found in the Methods chapter (cf. Section 4.4). The results in the present report are presented both in the overall view and differentiated according to sports or professional associations. Since only one person from the German Squash Association took part in the survey, this sport is not included in the evaluation.

2 A selection bias is a statistical distortion in the context of empirical surveys. Sampling bias occurs, for example, through self-selection. A random sample cannot be drawn from the total population or ensured, for example because there is no address material for the total population or participation is voluntary. In this case, people who are more interested in the topic of the survey are likely to participate disproportionately and thus distort the results.

2 Referees in sport in Germany



2.1 Personal characteristics: age and sex

In this report, various evaluations are carried out, differentiated according to age and gender. A brief overview of the participation of the referees and officials, differentiated according to these personal characteristics, is therefore made at this point to better classify the results presented in the course of the report.

The interviewed referees and officials were predominantly male (70.6 %). Almost three out of ten (29.3 %) of those surveyed were female, and 0.1 % were diverse. However, there are differences in participation by gender when a differentiated evaluation is carried out by sport (cf. Tab. 1). In the **sports of gymnastics and cheerleading in particular, significantly more female than male people took part in the survey**. In dancing and taekwondo, around a third of the referees and officials were women, while in athletics and rescue sport it was around 40 %.

Tab. 1: Gender of the interviewed referees and officials.

Sport	male	female	diverse
	Share (in %)		
TOTAL	70.6	29.3	0.1
Badminton	82.5	17.5	0.0
Cheerleading	20.0	80.0	0.0
Soccer (football)	94.2	5.7	0.1
Judo	76.6	23.1	0.3
Ju-Jutsu	77.3	22.7	0.0
Canoe	74.1	25.9	0.0
Athletics (track & field)	58.7	41.0	0.3
Motorsports	87.2	12.8	0.0
Rescue sport	60.0	40.0	0.0

Sport	male	female	diverse
	Share (in %)		
Rowing	73.5	26.5	0.0
Sailing	87.2	12.8	0.0
Taekwondo	69.2	30.8	0.0
Dancing	66.6	33.1	0.3
Tennis	82.3	17.7	0.0
Table tennis	87.6	12.4	0.0
Triathlon	74.3	25.7	0.0
Gymnastics	20.4	79.1	0.5

The participating referees and officials were on average 46.7 years old (average year of birth: 1974). Here, too, there are differences depending on the sport. **On average, the youngest referees and officials who took part in the survey came from cheerleading and judo, and the oldest from motorsport and dance sports** (see Tab. 2).

Tab. 2: Average age of the interviewed referees and officials.

Sport	Age (mean ³)
TOTAL	46.7
Badminton	48.6
Cheerleading	33.7
Soccer	40.5
Judo	39.3
Ju-Jutsu	40.7
Canoe	51.2
Athletics	49.6
Motorsports ⁴	56.8
Rescue sport	45.7
Rowing	47.6
Sailing	52.8

³ In this report, the mean is understood as the arithmetic mean, i.e. the statistical average value, in contrast to the median, which is also shown in some places.

⁴ This is motor sport in the professional association of the German Motor Sport Federation (cf. also Method, Section 4.4.1).

Sport	Age (mean ³)
Taekwondo	43.0
Dancing	53.2
Tennis	47.6
Table tennis	52.9
Triathlon	52.1
Gymnastics	40.0

If one considers the overall distribution of the age groups of the participating referees and officials, it can be seen that only a small proportion of the referees and officials surveyed were youths up to 18 years, while almost a fifth of the referees and officials in the survey were older than was 60 years. **The majority of the referees and officials surveyed came from the 41 to 60 age group** (cf. Tab. 3).

Tab. 3: Age groups of the interviewed referees and officials.

Age groups	Share (in %)
up to 18 years	1.0
19 to 26 years	8.7
27 to 40 years	25.3
41 to 60 years	48.0
over 60 years	17.0

If one draws a comparison with the total population in Germany, it becomes clear that men are overrepresented in the present data set of referees and officials compared to the general population⁵. In the year of the 2021 survey, 49.3 % of the population living in Germany were male (Statistisches Bundesamt, 2021). The average age was 44.7 years (Statistisches Bundesamt, 2022a).

2.2 Referee activity

2.2.1 Duration of activity

The referees and officials worked in this function for an average of 15.7 years. On average, they were active the longest in table tennis and dance sports, while referees and officials in triathlon and cheerleading were active the shortest on average (see Tab. 4). Unsurprisingly, there is a positive and significant correlation between the length of service and the age of referees and officials ($r = 0.561$). This means that the older the referee is, the longer the activity has lasted.

Tab. 4: Average duration of activity.

Sport	Duration in years (mean)
TOTAL	15.7
Badminton	18.6
Cheerleading	8.8
Soccer	14.1
Judo	15.8
Ju-Jitsu	16.7
Canoe	18.8
Athletics	14.9
Motorsports	17.8
Rescue sport	18.1
Rowing	17.9
Sailing	14.8
Taekwondo	14.6
Dancing	19.5
Tennis	13.5
Table tennis	19.7
Triathlon	8.4
Gymnastics	15.0

⁵ However, as explained in the introduction, no figures are available for the population of referees and officials in Germany, so that no statements can be made about representativeness despite the population figures.

If you also look at the distribution of the length of service, it shows that around a fifth of the referees and officials surveyed have been active for up to five years or between six and ten years and a good 18 % between 11 and 15 years. **A good 40 % of the referees and officials had been active in this function for more than 15 years at the time of the survey** (see Tab. 5).

Tab. 5: Distribution of the length of activity.

	Share (in %)
up to 5 years	20.2
6 to 10 years	21.0
11 to 15 years	18.2
16 to 20 years	13.0
21 to 25 years	9.1
26 to 30 years	7.7
31 to 35 years	4.7
36 to 40 years	3.2
over 40 years	2.9

The differentiated consideration according to the sports in which the referees and officials are active shows, among other things, that around half of those involved in triathlon have been doing the activity for up to five years, while around 7 % in canoeing and table tennis have already been active for more than 40 years as a referee or official (see Fig. 1).

2.2.2 Competition level

In 2019, i.e. in the year before the corona pandemic, the referees and officials surveyed were working at different competition levels. A total of 5.5 % indicated the community level and 6 % the district level as the highest competition level. Just under 18 % were deployed up to the state level and just under 12 % also at a supra-regional level, i.e. across federal state borders. A good third of the referees and officials indicated the national level as the highest competition level for assignments, and almost a quarter were also internationally active as referees (see Tab. 6).

Tab. 6: Highest competition level at which the referees were active in 2019.

	Share (in %)
Community level	5.5
District level	6.0
State level	17.6
Supraregional level	11.8
National level	34.8
International level	24.3

Differentiated according to sports in which the referees and officials participating in the survey worked, there are some differences with regard to the highest competition level (see Fig. 2). While referees and officials in badminton, cheerleading, ju-jitsu and taekwondo were only employed from at least the national level, the referees and officials in the other sports were active at all competition levels. It is noticeable that almost half of the referees and officials in football stated the district level as the highest competition level, while in motor sports, more than half were also active internationally (see Fig. 2).

2.2.3 Assignments by age group and gender

When asked about the age groups for which the referees and officials work, i.e. the age of the athletes, a total of 72 % of the referees and officials stated that they work with children. Almost 89 % also stated that they were engaged in competitions or games for young people, and over 95 % of the referees and officials are active in the adult sector (cf. Tab. 7).

If you look at the gender of the athletes, it shows that around 71 % of the referees and officials are active in games or competitions of male athletes in the youth and adult sectors. In the case of children, this applies to almost 70 % of the referees and officials. Competitions and games of female athletes are supervised by around 78 % of the referees and officials in the age groups of children and young people, while this applies to almost three-quarters of the refer-

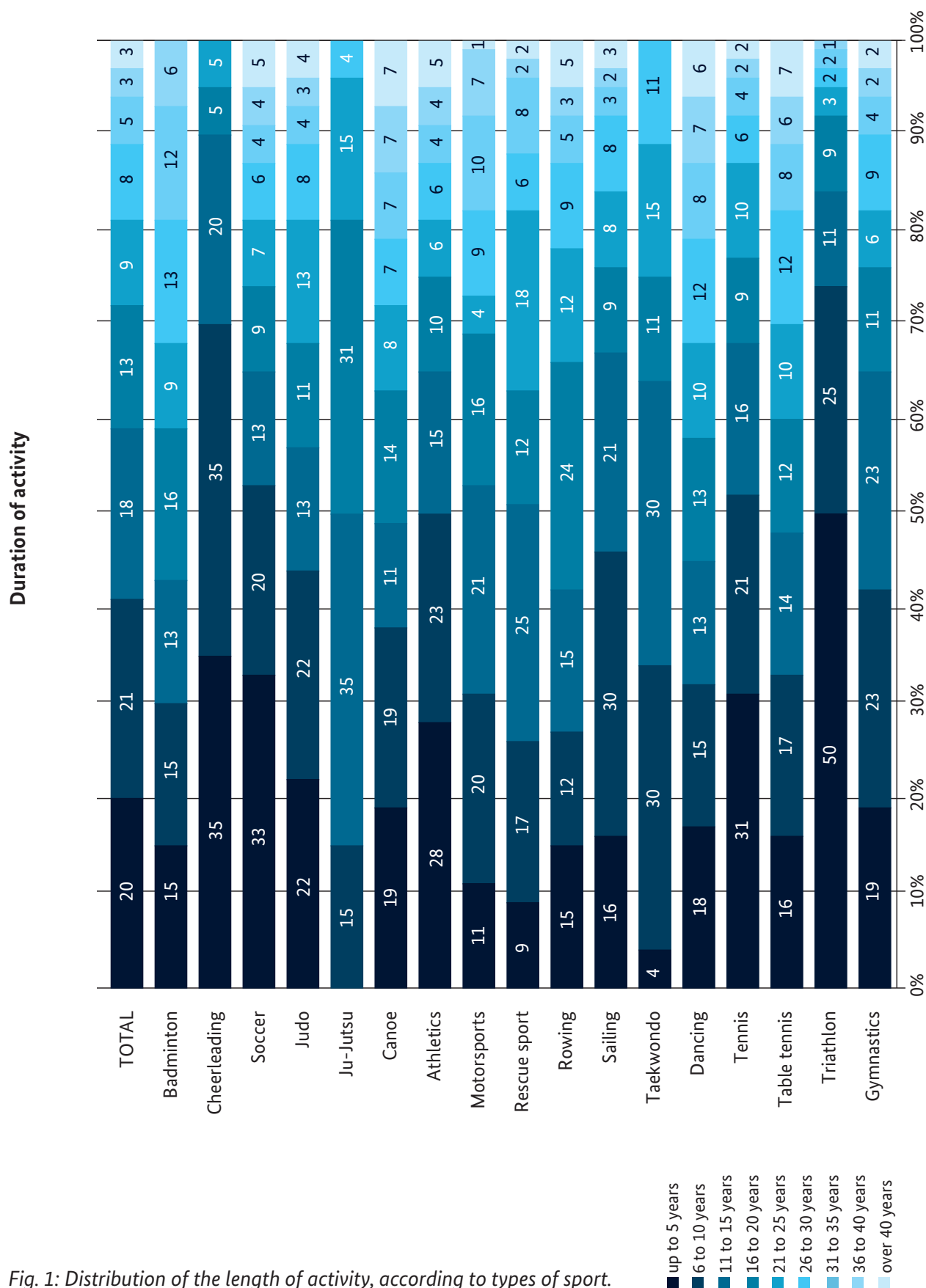
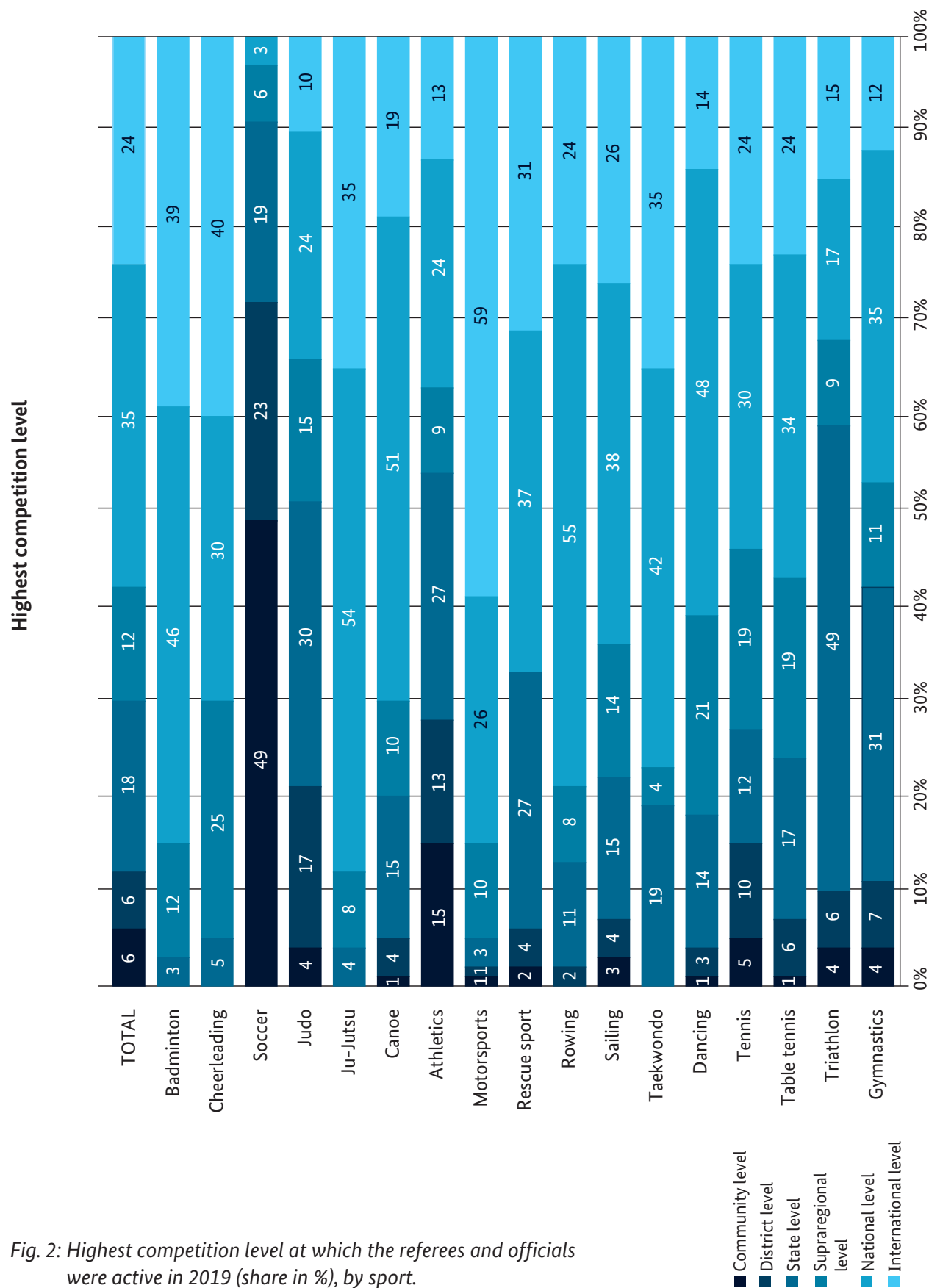


Fig. 1: Distribution of the length of activity, according to types of sport.



ees in the adult category. Mixed-gender groups are most frequently looked after by the interviewed referees and officials in the age group of children⁶ (cf. Tab. 7).

Tab. 7: Age groups for which the referees work.

	Share (in %)	Gender		
		male (in %)	female (in %)	mixed (in %)
Children	72.0	69.8	78.1	76.1
Adolescents	86.7	71.4	77.4	70.6
Adults	95.3	71.1	74.4	70.8

If one also distinguishes between types of sports here, a differentiated picture emerges in terms of age groups and genders (cf. Tab. 8 to Tab. 10). For example, all or almost all referees and officials surveyed in cheerleading, judo, ju-jutsu, taekwondo and gymnastics were working with children, while referees and officials in motor sports, soccer, tennis and badminton were less engaged in these age groups. However, referees and officials in badminton were active for all genders in the children's area (cf. Tab. 8).

Tab. 8: Referees and officials working with children, by sport.

Sport	Share (in %)	Gender		
		male (in %)	female (in %)	mixed (in %)
Badminton	35.8	100.0	100.0	100.0
Cheerleading	100.0	10.0	75.0	100.0
Soccer	32.8	87.4	61.1	50.1
Judo	96.2	89.3	89.0	49.3
Ju-Jutsu	96.2	96.0	96.0	96.0
Canoe	86.5	87.1	87.1	75.8
Athletics	80.4	73.9	73.8	65.3
Motorsports	31.4	45.5	45.5	68.2

Sport	Share (in %)	Gender		
		male (in %)	female (in %)	mixed (in %)
Rescue sport	82.4	81.2	81.2	84.1
Rowing	90.7	94.9	94.9	92.9
Sailing	68.5	51.0	50.0	87.0
Taekwondo	96.3	88.5	88.5	73.1
Dancing	93.6	22.3	25.1	94.9
Tennis	35.7	92.3	90.8	30.8
Table tennis	46.6	85.7	86.2	71.0
Triathlon	56.1	75.0	75.0	85.2
Gymnastics	94.9	44.1	90.3	36.1

In the youth age group, there were more referees and officials overall than in the childrens' group. The proportion of referees and officials in cheerleading, taekwondo, rowing, judo, rescue sports, gymnastics, ju-jutsu, dance sports, athletics and canoe working for young people was particularly large. While the proportions of mixed groups in football, tennis, gymnastics and judo were less common, this was more common in cheerleading, dance sport, badminton, sailing and ju-jutsu (see Tab. 9).

Tab. 9: Referees and officials working with adolescents, by sport.

Sport	Share (in %)	Gender		
		male (in %)	female (in %)	mixed (in %)
Badminton	79.1	88.7	88.7	96.2
Cheerleading	100.0	10.0	80.0	100.0
Soccer	75.9	93.8	57.6	22.6
Judo	97.6	90.0	89.2	31.4
Ju-Jutsu	96.2	96.0	96.0	92.0
Canoe	94.6	86.8	86.8	70.6
Athletics	95.6	72.8	73.2	59.9

⁶ The relatively high proportion of entries in the "Mixed" category may be due to different interpretations by those who filled out the form. In the classic sense, „mixed“ groups are teams of different genders. Possibly, however, the question was (also) interpreted here as "both and" with regard to gender, which could explain the high proportion of "mixed" in individual sports, especially among adults. On the other hand, the data for sports such as dancing, cheerleading and sailing are entirely plausible (see Tab. 10).

Sport	Share (in %)	Gender		
		male (in %)	female (in %)	mixed (in %)
Motorsports	45.7	34.4	37.5	75.0
Rescue sport	97.6	79.5	79.5	75.9
Rowing	99.1	94.3	94.3	84.0
Sailing	83.6	54.9	54.1	92.6
Taekwondo	100.0	88.9	88.9	74.1
Dancing	95.8	22.0	24.3	94.6
Tennis	60.0	92.7	90.9	29.1
Table tennis	73.8	86.5	86.5	67.9
Triathlon	81.3	74.8	74.2	86.2
Gymnastics	96.9	43.4	91.0	34.0

More than 80 % of the participating referees and officials came to work in the adult area in all sports. All respondents from the sports of badminton, cheerleading, ju-jutsu, motor sports, taekwondo and dance sports, as well as almost all from rowing, table tennis and triathlon, had assignments here. Mixed groups were least common in football, judo, tennis and gymnastics and most frequently in cheerleading, badminton, dance, ju-jutsu and sailing (see Tab. 10).

Tab. 10: Referees and officials working with adults, by sport.

Sport	Share (in %)	Gender		
		male (in %)	female (in %)	mixed (in %)
Badminton	100.0	85.1	83.6	95.5
Cheerleading	100.0	10.0	80.0	100.0
Soccer	88.7	93.8	64.7	8.8
Judo	84.6	90.7	89.5	31.6
Ju-Jutsu	100.0	96.2	96.2	92.3
Canoe	94.6	86.8	82.4	73.5
Athletics	86.5	75.1	74.1	58.6
Motorsports	100.0	38.6	27.1	75.7
Rescue sport	96.5	80.5	80.5	76.8
Rowing	98.1	93.4	93.4	89.6
Sailing	95.9	53.6	52.1	92.1

Sport	Share (in %)	Gender		
		male (in %)	female (in %)	mixed (in %)
Taekwondo	100.0	88.9	88.9	74.1
Dancing	100.0	24.6	26.5	95.5
Tennis	96.8	86.0	86.0	37.1
Table tennis	98.5	87.4	83.4	58.2
Triathlon	99.5	68.9	66.8	85.7
Gymnastics	81.9	48.1	89.3	39.8

2.2.4 Club membership

A good three-quarter (76.5 %) of the referees and officials surveyed work for a sports club. Thus, the remaining quarter should be in action for the respective association. In addition, **59.5 % of all referees across sports stated that they had another function in their club in addition to their work as referees and officials.** In particular, activities as a coach, trainer, board member and supervisor were mentioned. This shows that **more than a third of the referees and officials also work as coaches or trainers, almost a quarter of the referees and officials have a function as board members and 15% act as supervisors.** Less frequently (3.7 %) is the role of cash auditor. In addition, 16 % of the referees and officials stated that they held another function in the club (see Tab. 11).

Tab. 11: Additional function of the referee and official in the club.

	Share of referees (in %) if further commitment is exercised in the club	Share of all referees (in %)
Coach/trainer	58.6	34.8
Board member	41.1	24.4
Supervisor	25.2	15.0
Cash auditor	6.3	3.7
Other function in the club	27.0	16.0

Other functions mentioned by the referees and officials included head of department, youth manager/youth leader, sports manager/sports director, player/team leader, organisation, and responsible for press and public relations as well as IT and digitalisation.

When performing work for a sports club and other functions in the club, there are differences depending on the sport in which the referees and officials work. **Club work is most common in dance sports, soccer, gymnastics and triathlon, while cheerleading and motor sports are less common on average.** Referees and officials have other functions in the club, most often in gymnastics, sailing, dance, canoeing and rescue sports. On the other hand, other club functions in cheerleading, motor sports and tennis are rarely exercised by the referees and officials (cf. Tab. 12).

Tab. 12: Working for a sports club and other functions in the club, by type of sport.

Sport	Exercising for a sports club	Another function in the sports club
	Share (in %)	
TOTAL	76.5	59.5
Badminton	89.7	58.8
Cheerleading	20.0	20.0
Soccer	97.4	51.8
Judo	78.4	63.6
Ju-Jutsu	61.5	53.8
Canoe	87.5	76.1
Athletics	84.1	63.3
Motorsports	45.7	31.4
Rescue sport	89.7	75.9
Rowing	66.7	52.8
Sailing	89.7	78.8
Taekwondo	53.8	50.0
Dancing	99.3	77.3
Tennis	54.9	43.5
Table tennis	89.5	71.1

Sport	Exercising for a sports club	Another function in the sports club
	Share (in %)	
Triathlon	91.9	59.9
Gymnastics	93.7	81.9

2.2.5 Frequency of operations

Almost four out of ten referees and officials stated that they normally, i.e. before the start of the corona pandemic, had been active in their function relatively regularly. Almost a third of the referees and officials stated that they were active one to three times a month, while a good 6 % had assignments at least once a week or more frequently. However, almost 62 % were on duty less than once a month (see Fig. 3). **Depending on the sport, however, there are quite clear differences in terms of the frequency of the assignments of the referees and officials.** It is striking that, with the exception of referees and officials in football, judo and tennis, more than half of the referees and officials surveyed stated that they were on duty less than once a month before the pandemic (see Fig. 3).

2.2.6 Operations and offending incidents in 2019

On average, the referees surveyed stated that they had officiated at just under **13 competitions or matches in 2019. They were offended in an average of just under 0.7 assignments. This corresponds to an average of 4.9 % of the assignments in 2019.** However, **differences between the sports** in which the referees and officials are active are again evident here (cf. Tab. 13).

The largest average number of assignments was given by referees and officials in football (M=41.7), badminton (M=29.2) and tennis (M=25.2). **In relation to the number of operations as a referee, insulting incidents occurred most frequently in ju-jutsu, soccer and judo,**

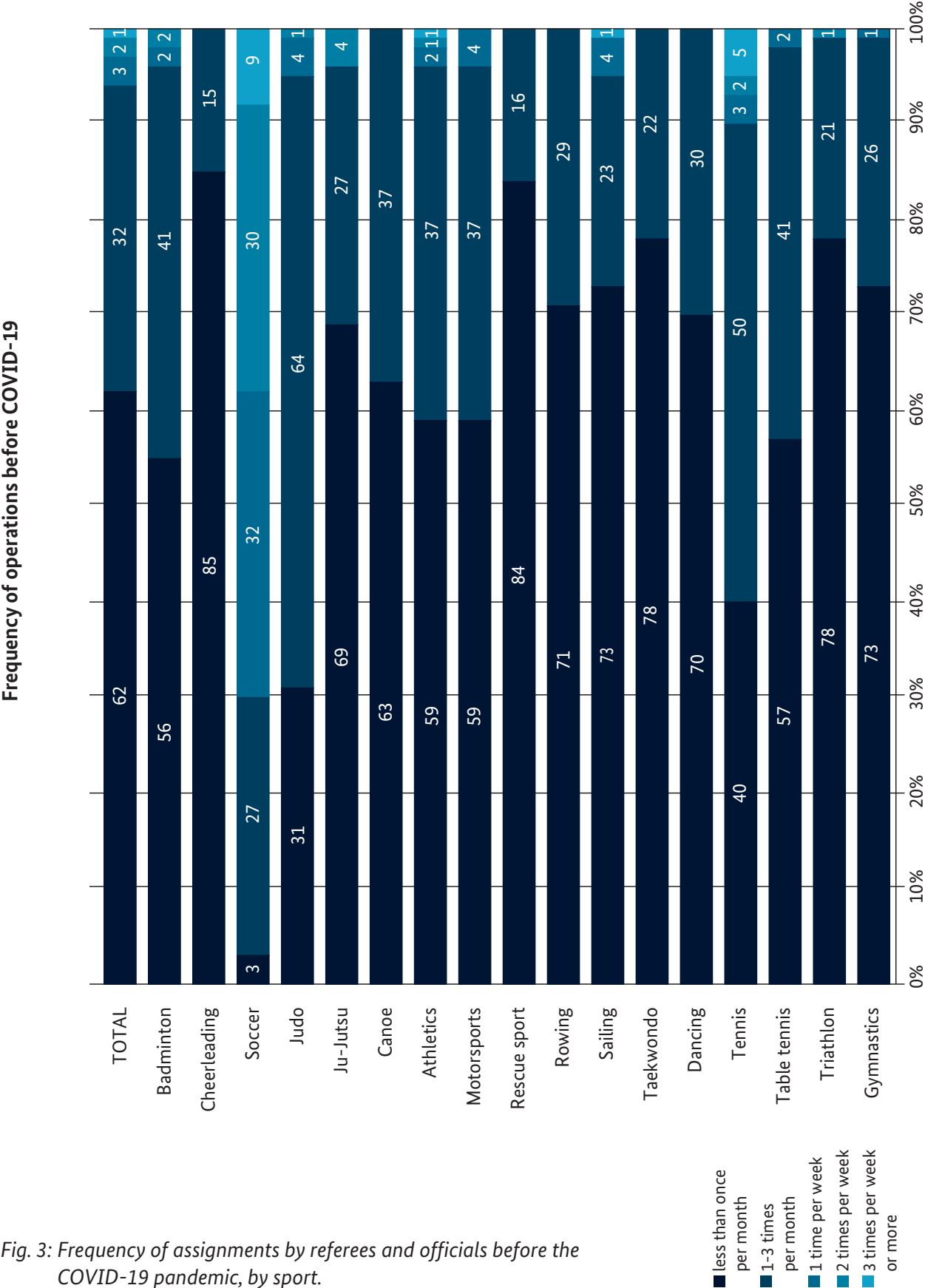


Fig. 3: Frequency of assignments by referees and officials before the COVID-19 pandemic, by sport.

while this was less often the case in dancing, badminton, cheerleading, athletics and taekwondo (cf. Tab. 13).

An average of 13 % of the referees and officials felt discriminated against by the insults. This applied proportionally most frequently to referees and officials in taekwondo, rowing, triathlon, judo and soccer, while nobody in badminton, cheerleading and rescue sports felt discriminated against (see Tab. 13).

All in all⁷, **perceived discrimination based on age and gender was mentioned above all.** There was also perceived discrimination in relation to ethnic origin. Perceived discrimination

based on a disability, sexual identity or religion was mentioned less frequently overall (cf. Fig. 4). Almost a quarter of the referees and officials who felt discriminated against stated the following other forms of discrimination: appearance (height, body weight, wearers of glasses, hair colour), German past ("Nazi") and general insults (swear words). **Compared to the current anti-discrimination report of the Federal Anti-Discrimination Agency (Antidiskriminierungsstelle, 2022), which in particular identifies requests for advice due to discrimination in the areas of ethnic origin and due to disabilities, other areas (age and gender) predominate among the referees.**

Tab. 13: Number of operations and insults in 2019, by sport.

Sport	Operations (mean)	Operations with insults		
		Number (mean)	Share in Operations (in %)	Feeling discriminated (share in %)
TOTAL	12.8	0.7	4.9	13.0
Badminton	29.2	0.3	2.2	0.0
Cheerleading	6.3	0.2	2.5	0.0
Soccer	41.7	4.3	10.7	18.5
Judo	16.1	1.2	8.3	19.4
Ju-Jutsu	8.9	1.3	11.9	7.1
Canoe	8.0	0.2	3.8	11.1
Athletics	9.9	0.3	2.5	13.9
Motorsports	8.5	0.3	3.5	16.7
Rescue sport	6.9	0.3	4.7	0.0
Rowing	6.9	0.3	3.7	27.3
Sailing	5.7	0.3	5.8	15.0
Taekwondo	7.3	0.3	2.6	33.3
Dancing	14.7	0.1	1.3	11.1
Tennis	25.2	0.9	6.7	6.7
Table tennis	9.3	0.3	3.0	9.2
Triathlon	5.0	0.4	5.4	20.0
Gymnastics	7.6	0.3	3.0	14.8

⁷ A differentiation according to sports is not possible at this point due to the small number of cases.

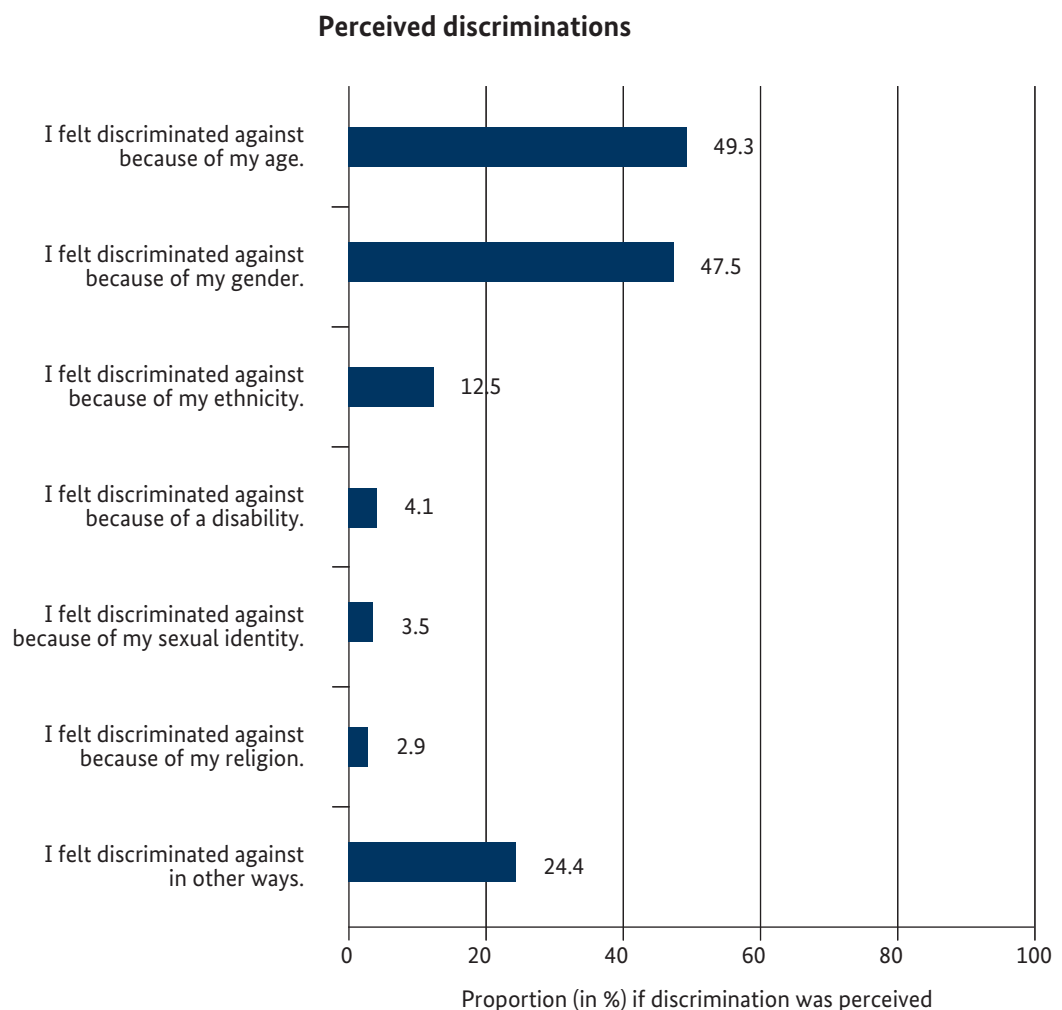


Fig. 4: Type of discrimination felt by referees and officials.

2.2.7 Operations involving threats or physical assaults

In addition, the referees and officials surveyed felt threatened on average in only very few assignments ($M=0.06$). Here, **96.6 % stated that they had not been threatened during any assignment or competition**. On average, the proportion of assignments with threats corresponds to 0.45 % of all assignments in 2019. In ju-jutsu, rowing and football, the proportion of assignments with threats was over one per cent, while threats to referees and officials occurred in less than one per cent of the assignments in all other sports surveyed (cf. Tab. 14).

In very rare cases, in addition to threats, physical attacks on the referees and officials have occurred. **This was most common in football (0.24 % of appearances) in relation to the number of appearances**. Across all sports examined, there were physical attacks on average in 0.004 cases. **This means that 99.7 % of the operations of the referees and officials surveyed were carried out without physical attacks.**

2.2.8 Limitations in the activity

The referees and officials were asked whether they felt restricted in their work due to time constraints or lack of knowledge. Here the picture

Tab. 14: Number of incidents involving threats or physical attacks in 2019, by sport.

Sport	Operations (mean)	Operations with threats		Operations with physical assaults	
		Number (mean)	Share in Operations (in %)	Number (mean)	Share in Operations (in %)
TOTAL	12.8	0.06	0.45	0.004	0.02
Badminton	29.2	0.03	0.01	0	0
Cheerleading	6.3	0	0	0	0
Soccer	41.7	0.47	1.17	0.05	0.24
Judo	16.1	0.06	0.41	0.003	0.03
Ju-Jitsu	8.9	0.12	1.71	0	0
Canoe	8.0	0	0	0	0
Athletics	9.9	0.01	0.06	0.001	0.02
Motorsports	8.5	0.05	0.49	0	0
Rescue sport	6.9	0.01	0.29	0	0
Rowing	6.9	0.10	1.41	0	0
Sailing	5.7	0.01	0.05	0	0
Taekwondo	7.3	0.07	0.93	0	0
Dancing	14.7	0.002	0.02	0	0
Tennis	25.2	0.06	0.34	0.01	0.005
Table tennis	9.3	0.02	0.23	0	0
Triathlon	5.0	0.02	0.25	0	0
Gymnastics	7.6	0.01	0.15	0.01	0.06

is divided. On a 5-point scale (from 1=“do not agree at all” to 5=“strongly agree”), **the majority of referees and officials do not agree at all or rather not agree with the statement that their knowledge and skills as a referee or official limit them in their work** (cf. Fig. 5). The mean value is $M=1.57$, which is even lower than the mean value for coaches and trainers who were asked the same question in 2018 (Breuer & Feiler, 2020a). Only around 4 % of referees see this as limiting their activities. In contrast, around **23 % of referees agree with the statement that it will be difficult to find the necessary time for their work in the coming season** (cf. Fig. 5). The mean value here is $M=2.49$.

Even if, on average, only a few referees and officials see themselves restricted in the ex-

ercise of their work, there are still gender-specific differences. **In comparison to men, women feel significantly more often limited by their knowledge and skills and also because of the time resources with regard to their work.** The differences to gender-diverse people are not statistically significant (see Tab. 15)

Younger referees and officials feel significantly more restricted by their knowledge and skills than all older age groups. The feeling of being restricted by knowledge and skills decreases with age. People over 60 feel significantly less restricted by this than all younger referees and officials. On the other hand, the **younger age groups of up to 40-year-old referees and officials** in particular feel limited in terms of time, while those over 60 see fewer problems in

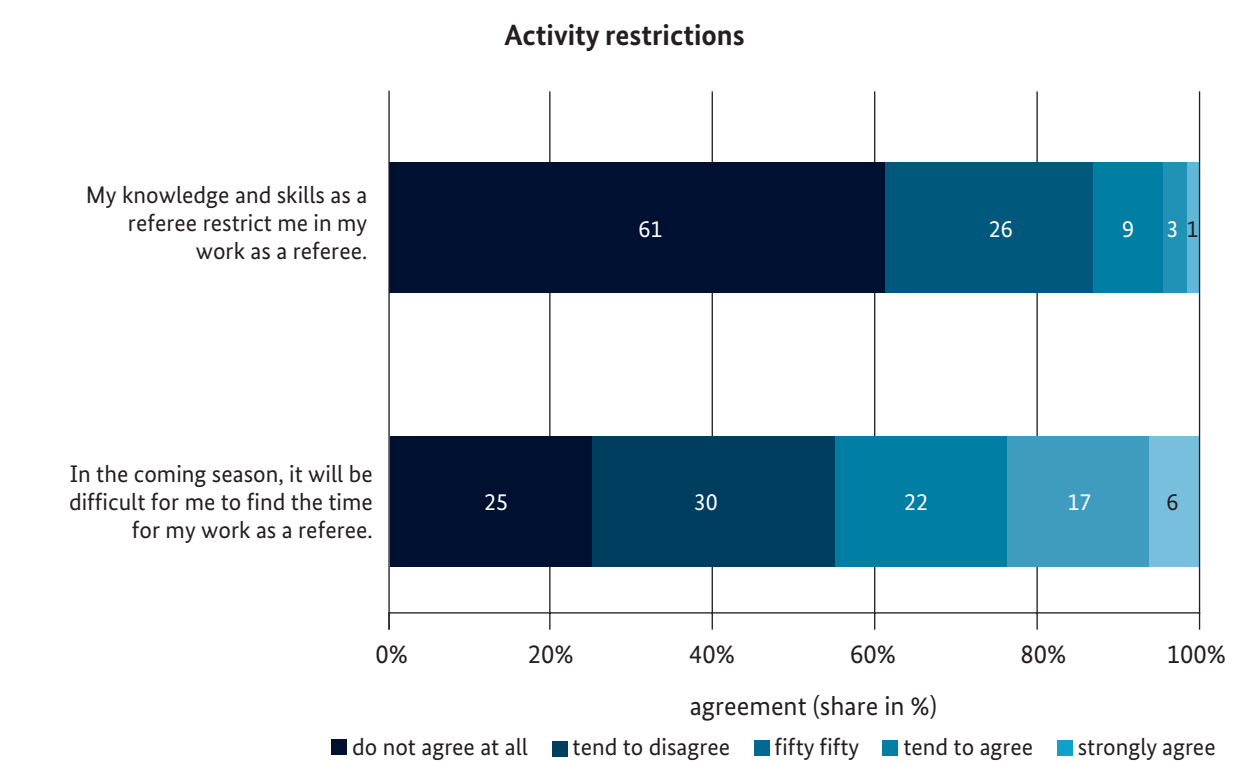


Fig. 5: Restrictions when exercising the activity.

Tab. 15: Restrictions on the activity (mean value; 1= “do not agree at all” to 5= “strongly agree”), by gender.

	total	gender			Significance m/f
		male	female	diverse	
		mean			
My knowledge and skills as a referee restrict me in my work as a referee.	1.57	1.53	1.60	1.71	0.022*
In the coming season, it will be difficult for me to find the time for my work as a referee.	2.49	2.37	2.66	3.60	0.000***

Tab. 16: Restrictions on the activity (mean value; 1= “do not agree at all” to 5= “strongly agree”), by age group.

	Age (in years)					Significance
	until 18	19-26	27-40	41-60	over 60	
	mean					
My knowledge and skills as a referee restrict me in my work as a referee.	2.00	1.64	1.62	1.55	1.36	0.000***
In the coming season, it will be difficult for me to find the time for my work as a referee.	2.95	2.74	2.89	2.39	1.80	0.000***

finding time to work as referees in the coming season (cf. Tab. 16). This could be due to the professional and family situation, which tends to put more strain on younger people than older ones.

If one looks at the perceived limitations according to the sports in which the referees and officials are active, it becomes apparent that the referees in gymnastics, rescue sports and athletics feel restricted most frequently by their knowledge and skills, although the mean ($M=1.76$) is also rather low in these sports. Finding the necessary time for work in the coming season appears to referees in judo ($M=2.97$) and gymnastics ($M=2.96$) as more of a challenge than it does for referees in motorsport ($M=2.20$), dance sport ($M=2.21$), badminton ($M=2.22$) and triathlon ($M=2.24$) (see Tab. 17).

2.3 Motivation

2.3.1 Reasons for carrying out the activity

If one asks the referees about the reasons for their commitment, a variety of individual motives emerges. From a list of 32 items, the participants in the survey were able to use a 7-point scale (from 1=“do not agree at all” to 7=“agree completely”) to indicate the extent to which they agreed with the reasons given for carrying out the activity.

The referees and officials carry out the activity in particular out of connection to the sport and because they enjoy it. More than 90 % of the referees and officials state that they work for these reasons (see Fig. 8). **They also want to**

Tab. 17: Restrictions on the activity (mean value; 1=“do not agree at all” to 5=“strongly agree”), by type of sport.

Sport	My knowledge and skills as a referee restrict me in my work as a referee.	In the coming season, it will be difficult for me to find the time for my work as a referee.
	mean	
Badminton	1.44	2.22
Cheerleading	1.37	2.58
Soccer	1.67	2.37
Judo	1.72	2.97
Ju-Jitsu	1.60	2.40
Canoe	1.58	2.52
Athletics	1.76	2.61
Motorsports	1.67	2.20
Rescue sport	1.76	2.68
Rowing	1.33	2.37
Sailing	1.58	2.59
Taekwondo	1.54	2.44
Dancing	1.33	2.21
Tennis	1.53	2.63
Table tennis	1.61	2.35
Triathlon	1.47	2.24
Gymnastics	1.76	2.96

do something worthwhile in their free time. Furthermore, a good feeling when doing the job plays a decisive role, as does the fun of helping others and the general joy of commitment (see Fig. 6).

The referees and officials, on the other hand, feel less or not at all motivated by material incentives. The interviewed referees and officials stated that they were only slightly motivated to carry out the activity by receiving money, the provision of sportswear and the reduced payment of membership fees (cf. Fig. 7). Around 90 % do not agree that reduced membership fees or the provision of sportswear would play a role in carrying out the work. **In addition, around three-quarters of the referees and officials say that receiving money for doing the job would have no motivating effect** (see Fig. 9).

When looking at the individual reasons for volunteering, there are some gender differences. For example, men are the most likely to agree to carry out the activity because they feel a duty to help others, while gender-diverse people are the least likely to agree. The differences between all three groups are statistically significant. On the other hand, on average, gender-diverse people agreed the most strongly to do the activity because it is important to people who know them best. The difference between gender-diverse and male and female referees and officials is statistically significant (see Fig. 7). All other differences marked as significant relate to differently pronounced motives in men and women (cf. Fig. 6 and Fig. 7).

If one considers the various motives, differentiated according to the age groups of the referees and officials, significant differences between different age groups can be seen for all motives (cf. Fig. 10 to Fig. 12). For example, it is noticeable that **the oldest referees and officials agree the most with motives related to social responsibility and the community.** On the other hand, for the **youngest age group of up to 18 year olds, gaining experience and learning new**

things are comparatively more important than for older referees and officials. On average, the oldest and youngest are the most likely to do the job because their family or social environment supports them. In contrast, this applies least strongly to the 27 to 40 age group. **Sporting success and material incentives tend to play a greater role for the younger age groups.**

A detailed evaluation of the 32 reasons for exercising the activity according to the sports from which the referees and officials come can be found in the appendix (cf. Tab. 35 and Tab. 36). This shows, for example, that monetary incentives in the form of payments are most pronounced among referees and officials in cheerleading, tennis and soccer and least so in sailing, rowing and rescue sports. On the other hand, it is striking that referees in gymnastics are the least likely to say that they do the activity because they enjoy it. Personal development and gaining experience play the comparatively least important role for referees and officials in athletics, gymnastics and rowing, while these aspects are most important for referees and officials in cheerleading. However, the relatively young age of the corresponding referees and officials in cheerleading might also play a role here.

2.3.2 Factors of the engagement

In the previous section, the individual reasons for carrying out the work of referees and officials were presented in detail. In order to be able to choose a more compact form of presentation, the content of the 32 individual items was summarized using a factor analysis⁸. Factor analyses are a common method for reducing complexity in large item batteries and have already been used in the past to work out bundles of motives for volunteering in sports clubs (e.g. Braun, 2003; Breuer & Feiler, 2020a, b; Hoyer et al., 2008).

With the help of factor analysis, the 32 individual items could be **combined into a total of eight overarching motives.** The motives

8 For the procedure, see Method, Section 4.5.4.

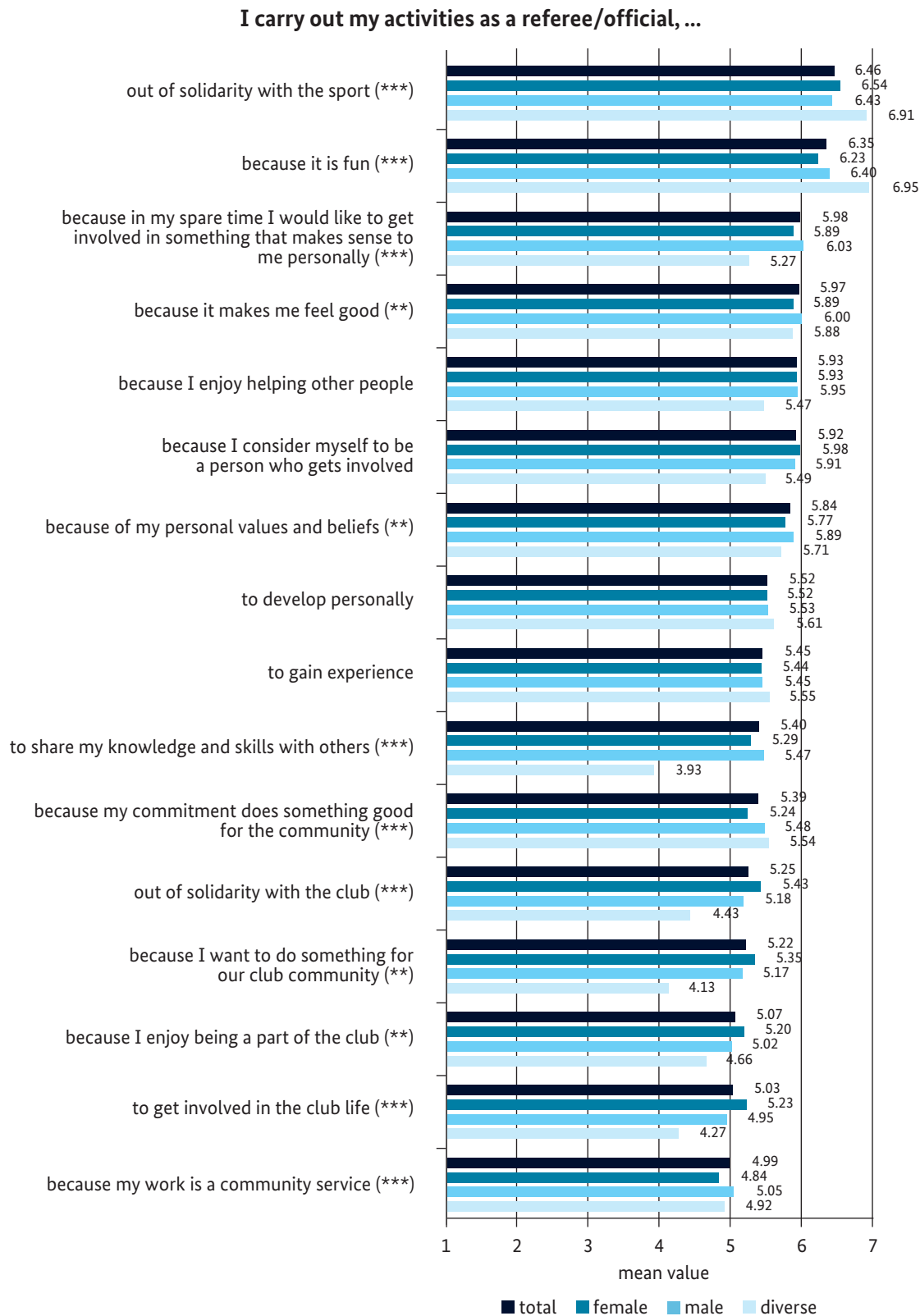


Fig. 6: Motives of the referees and officials for carrying out the activity, by gender (1="do not agree at all" to 7="agree completely"; part 1).

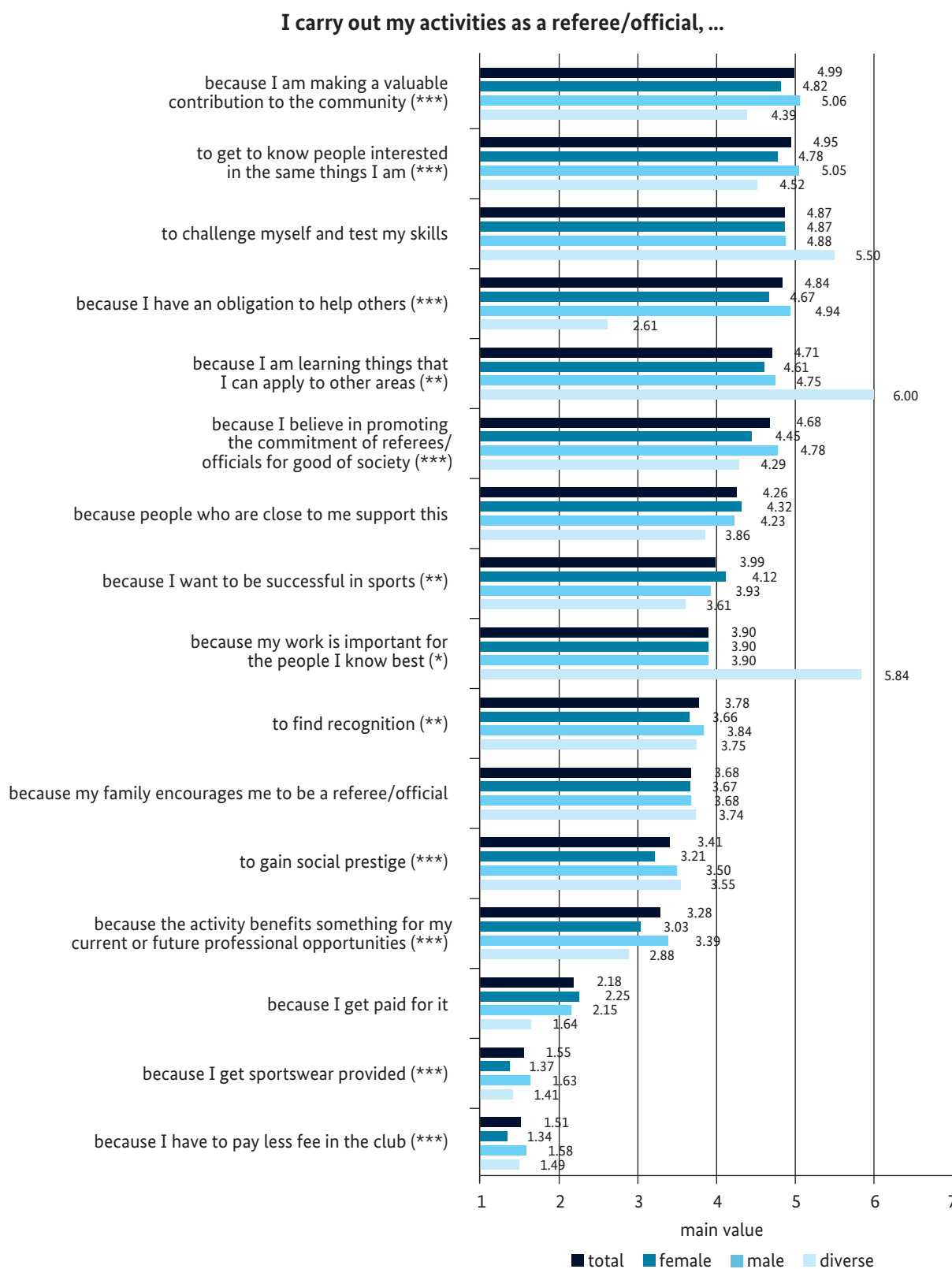


Fig. 7: Motives of the referees and officials for carrying out the activity, by gender (1="do not agree at all" to 7="agree completely"; part 2).

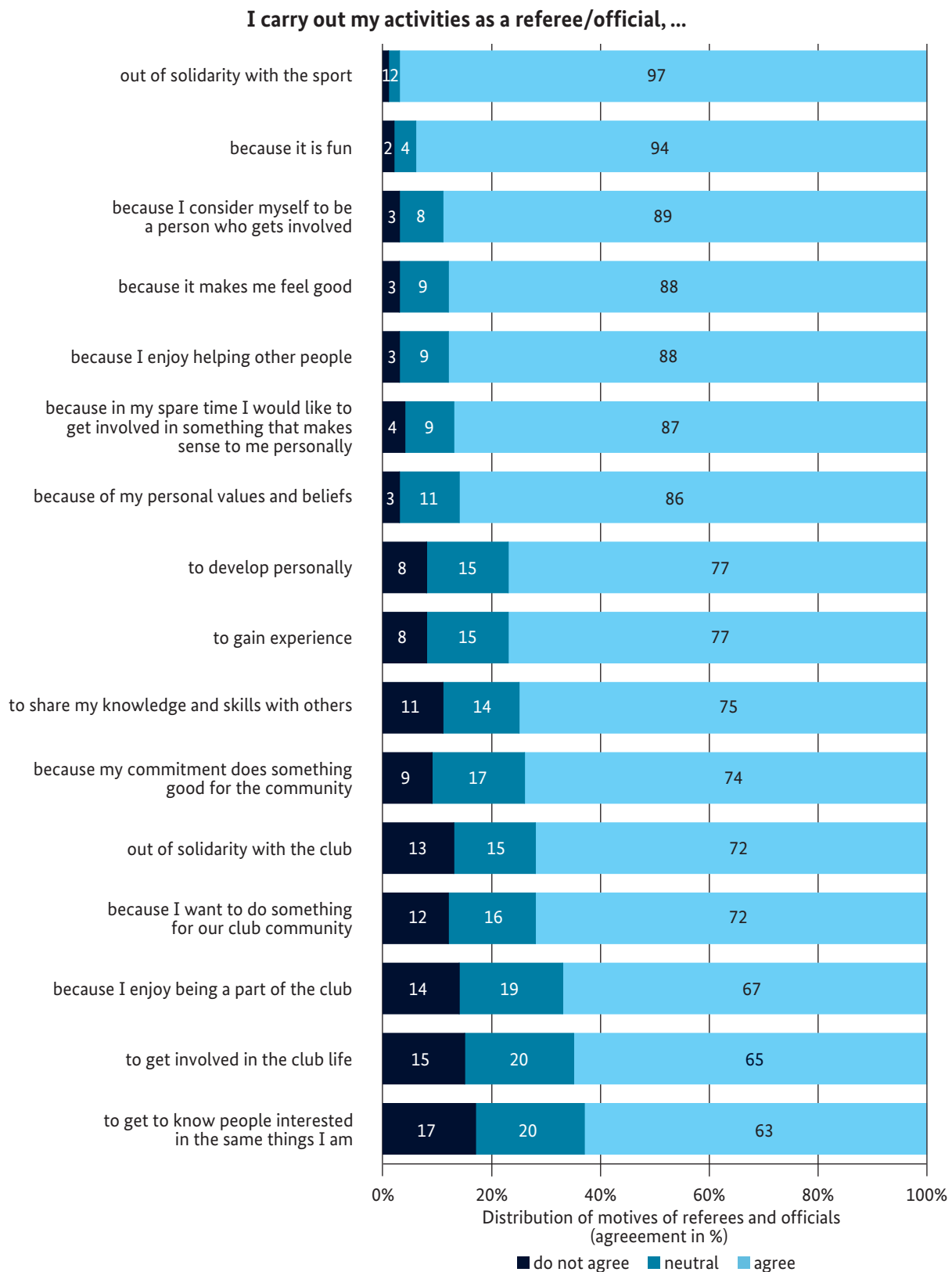
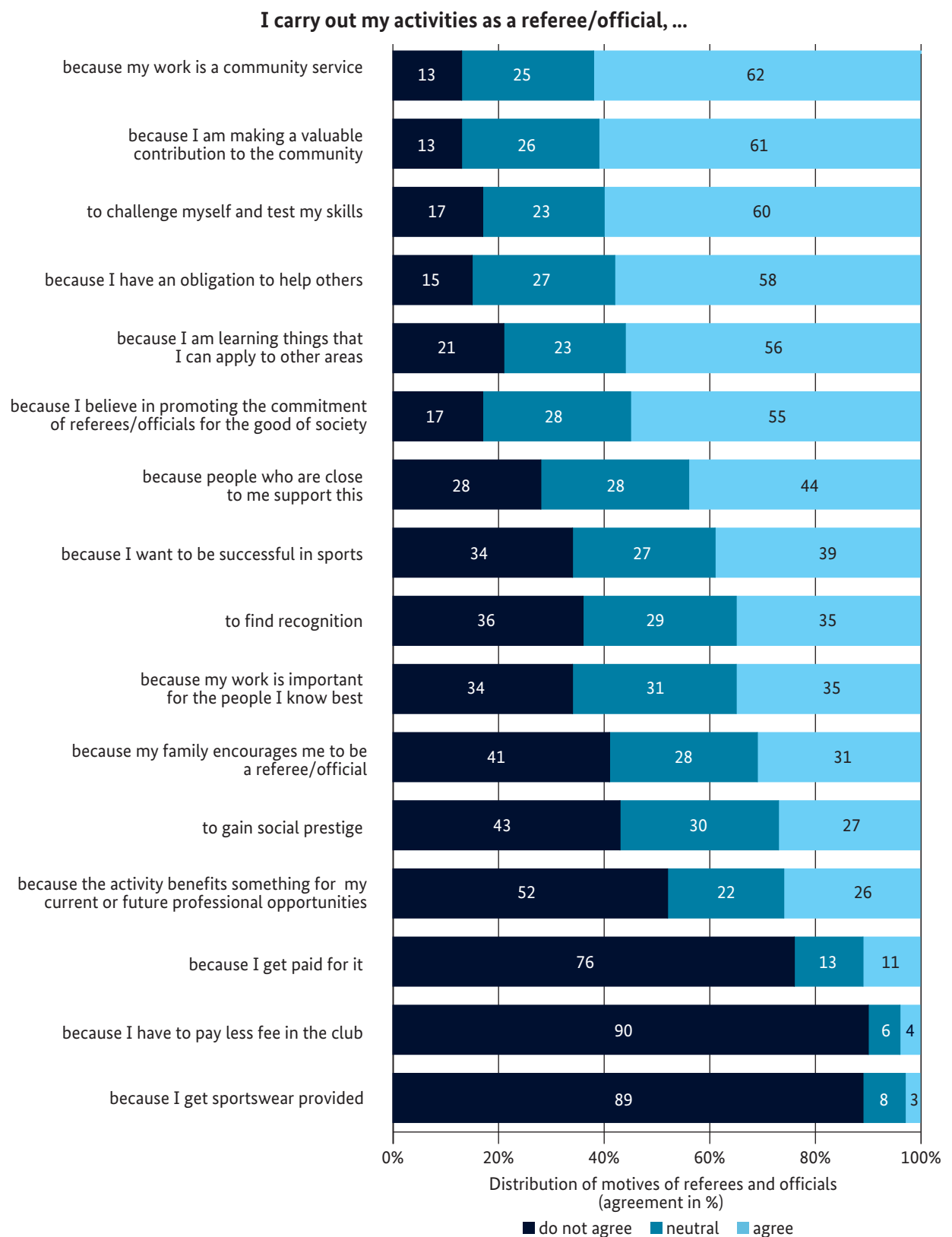


Fig. 8: Distribution of the motives of the referees and officials
(1 to 3=(rather) rejection; 4=neutral; 5 to 7=(rather) agreement; part 1).



*Fig. 9: Distribution of the motives of the referees and officials
(1 to 3=(rather) rejection; 4=neutral; 5 to 7=(rather) agreement; part 2).*

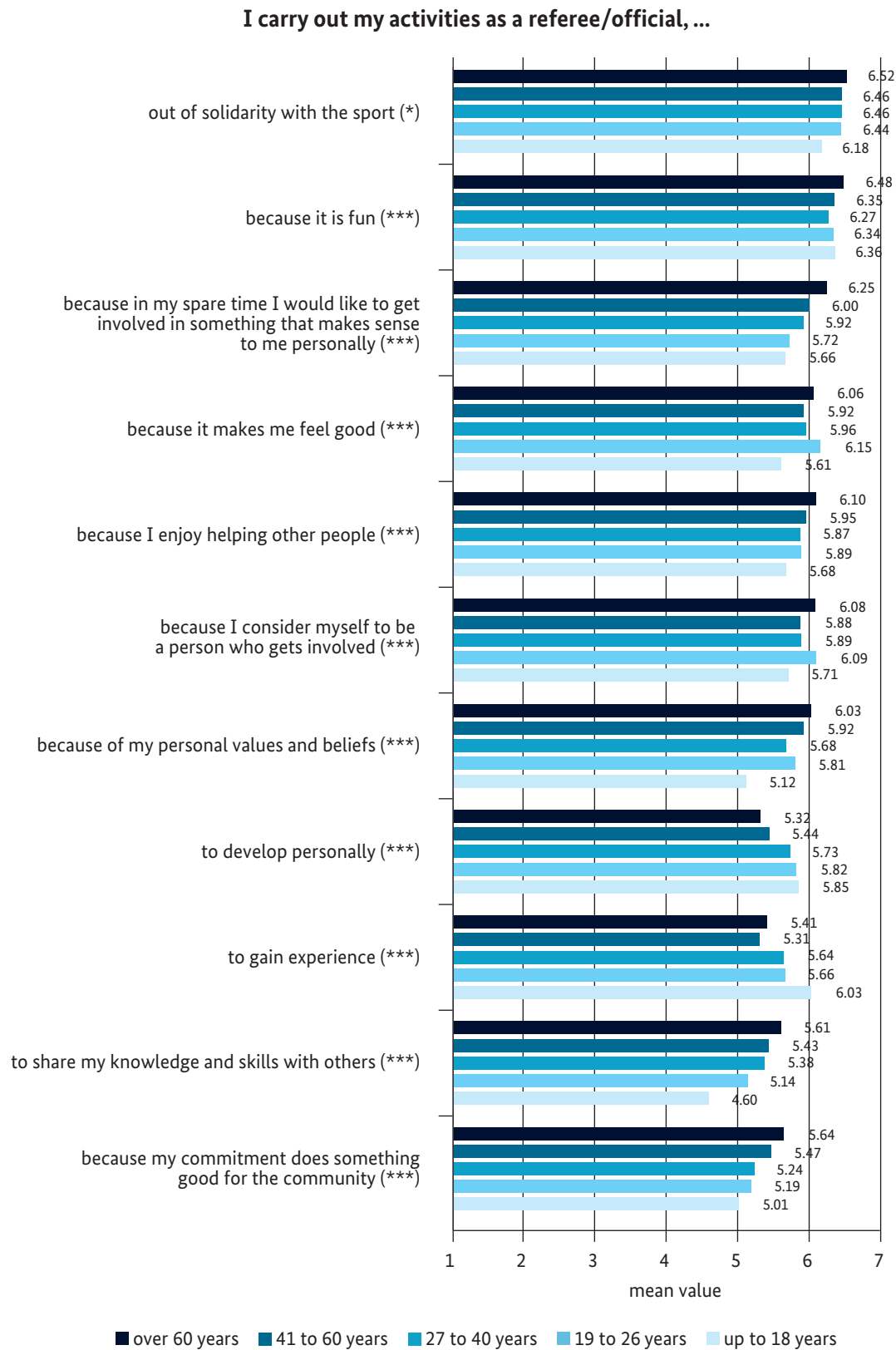


Fig. 10: Motives of the referees and officials for carrying out the activity, according to age groups (1="do not agree at all" to 7="agree completely"; part 1).

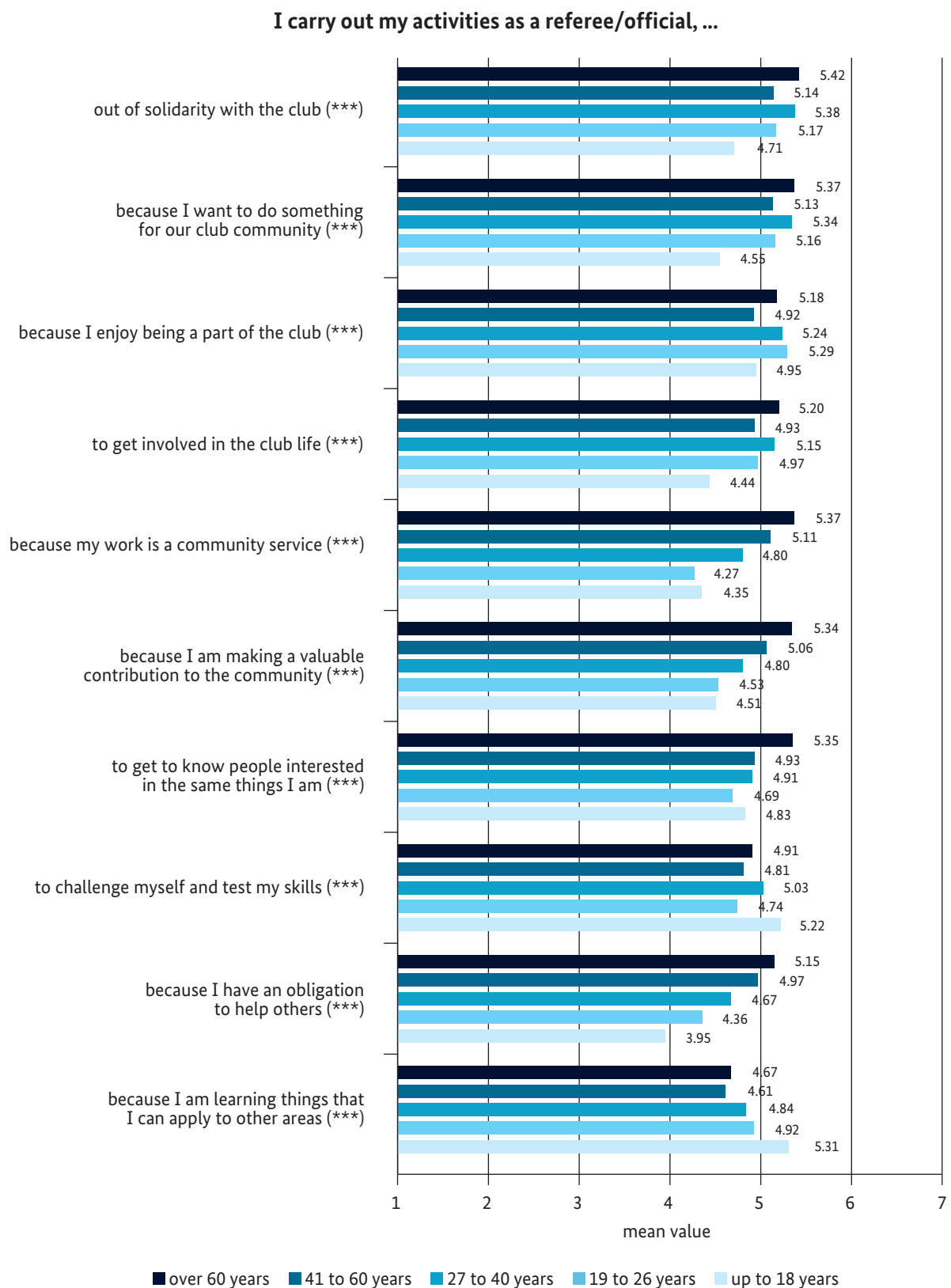


Fig. 11: Motives of the referees and officials for carrying out their activity, according to age groups (1="do not agree at all" to 7="agree completely"; part 2).

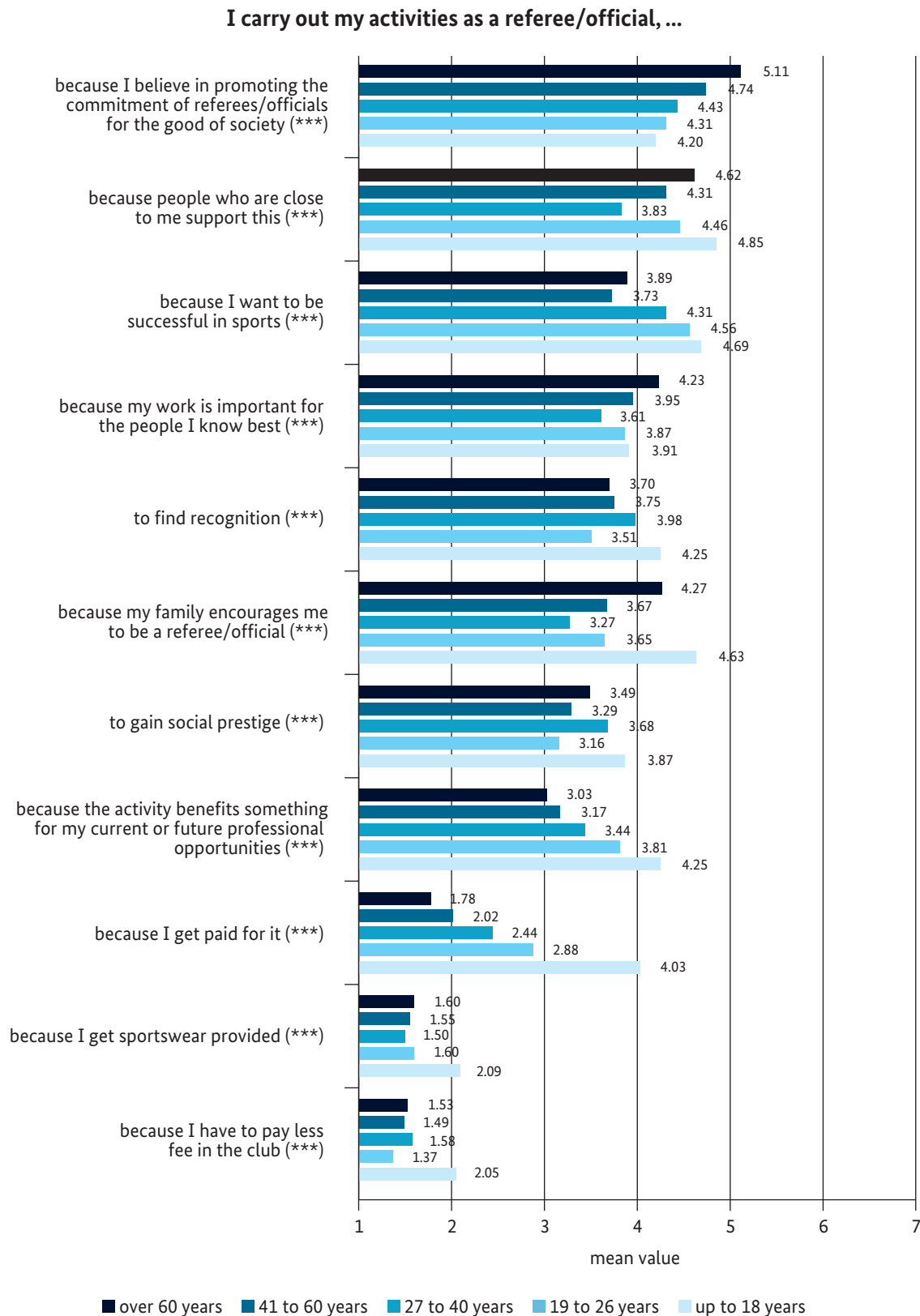


Fig. 12: Motives of the referees and officials for carrying out their activity, according to age groups (1="do not agree at all" to 7="agree completely"; part 3).

for working as a referee can be summarized as follows: **1) fun and sport, 2) altruism/values, 3) community orientation/club membership, 4) social responsibility, 5) personal development and success, 6) social environment, 7) recognition and 8) material aspects** (see Tab. 18).

If one forms additive indices for the extracted factors or motives on the basis of the individual items (i.e. also on the 7-point scale described above), it becomes apparent that the highest **approval of the referees is found in the motive „fun and sport“**. The mean value here is $M=6.26$, which is well ahead of the **second most important group of motives, namely the understanding of values or altruism** ($M=5.70$). The “fun motive” has also emerged as the most important motive for volunteers in sport in the current sport-related special evaluation of the volunteer surveys (Braun, Sielschott & Burrmann, 2022). The third most important motive is the community orientation within the club ($M=5.14$), but social responsibility ($M=5.01$) also plays an important role for the referees. Community orientation had already emerged as an important motive in earlier studies on the mo-

tivation of volunteers based on similar items (cf. Braun, 2003; Breuer & Feiler, 2020a, b). Furthermore, the sports-related special evaluations of the volunteer survey show that more than two-thirds, or according to the latest evaluation, even more than three-quarters, of those involved in sports, work in order to get together with other people (cf. Braun, 2011; Braun, Sielschott & Burrmann, 2022).

In addition to the community-oriented motives as well as fun and the sport itself, which are also important motivations for coaches and trainers to carry out their work (cf. Breuer & Feiler, 2020a), the motive of personal development ($M=4.77$) reaches on average rather moderate agreement, while the social environment ($M=3.94$) plays on average a less important role for the motivation of the referees and officials. **The recognition motive is even less pronounced ($M=3.60$), while the lowest average agreement is given to the material incentives motive ($M=1.70$). A similar picture had already emerged among coaches and trainers as well as board members** (cf. Breuer & Feiler, 2020a, b).

Tab. 18: Result of the factor analysis on the motives of the referees and officials.

Motives	Items (1=do not agree at all; 7=agree completely) „I carry out the activity...”	Factor loading	Mean	Cronbach’s alpha
Fun and sports				
	... because it is fun	0.801	6.26	0.767
	... because it makes me feel good	0.752		
	... out of solidarity with the sport	0.661		
Altruism / understanding of values				
	... because I enjoy helping other people	0.778	5.70	0.784
	... because I have an obligation to help others	0.639		
	... because I consider myself to be a person who gets involved	0.622		
	... because of my personal values and beliefs	0.588		
	... because in my spare time I would like to get involved in something that makes sense to me personally	0.526		

Motives	Items (1=do not agree at all; 7=agree completely) „I carry out the activity...“	Factor loading	Mean	Cronbach's alpha
Community orientation / club membership				
	... out of solidarity with the sport	0.880	5.14	0.914
	... to get involved in the club life	0.879		
	... because I want to do something for our club community	0.861		
	... because I enjoy being a part of the club	0.767		
Social responsibility				
	... because my work is a community service	0.846	5.01	0.893
	... because I am making a valuable contribution to the community	0.843		
	... because I believe in promoting the commitment of referees/ of- ficials for the good of society	0.732		
	... because my commitment does something good for the community	0.718		
Personal development and success				
	... to develop personally	0.825	4.77	0.853
	... to gain experience	0.782		
	... because I am learning things that I can apply to other areas	0.763		
	... to challenge myself and test my skills	0.717		
	... because the activity benefits something for my current or future professional opportunities	0.622		
	... to share my knowledge and skills with others	0.613		
	... to get to know people interested in the same things I am	0.583		
	... because I want to be successful in sports	0.495		
social environment				
	... because my family encourages me to be a referee	0.826	3.94	0.787
	... because people who are close to me support this	0.778		
	... because my work is important for the people I know best	0.649		
recognition				
	... to find recognition	0.891	3.60	0.893
	... to gain social prestige	0.852		
material aspects				
	... because I have to pay less fee in the club	0.818	1.70	0.698
	... because I get sportswear provided	0.793		
	... because I get paid for it	0.719		

If one also considers the proportion of those participants who fully agree with the eight motives (i.e. values of the additive index ≥ 6.50), it can be seen that almost half (49 %) fully agree with the motive “fun and sport” (cf Fig. 13).

Significant differences between men and women⁹ can be seen in the “personal development and success” motive, which almost 9 % of men fully agree with, while only 4.6 % of women fully agree that this motive should be pursued in their work. A similar picture emerges for the motives of recognition and social responsibility, which proportionately also find greater full approval from men than from women. On

the other hand, the motive of community orientation and membership of a club is highly relevant for almost a quarter of the female referees, while the share among male referees and officials is a good 21 % (see Fig. 13).

If one looks at the motives of the referees and officials according to age group (see Fig. 14), it can be seen, for example, that the **over 60-year-olds pursue the motives of social responsibility and altruism or the understanding of values much more than the younger age groups.** The differences are statistically significant for all other age groups. With regard to the motive of community orientation or member-

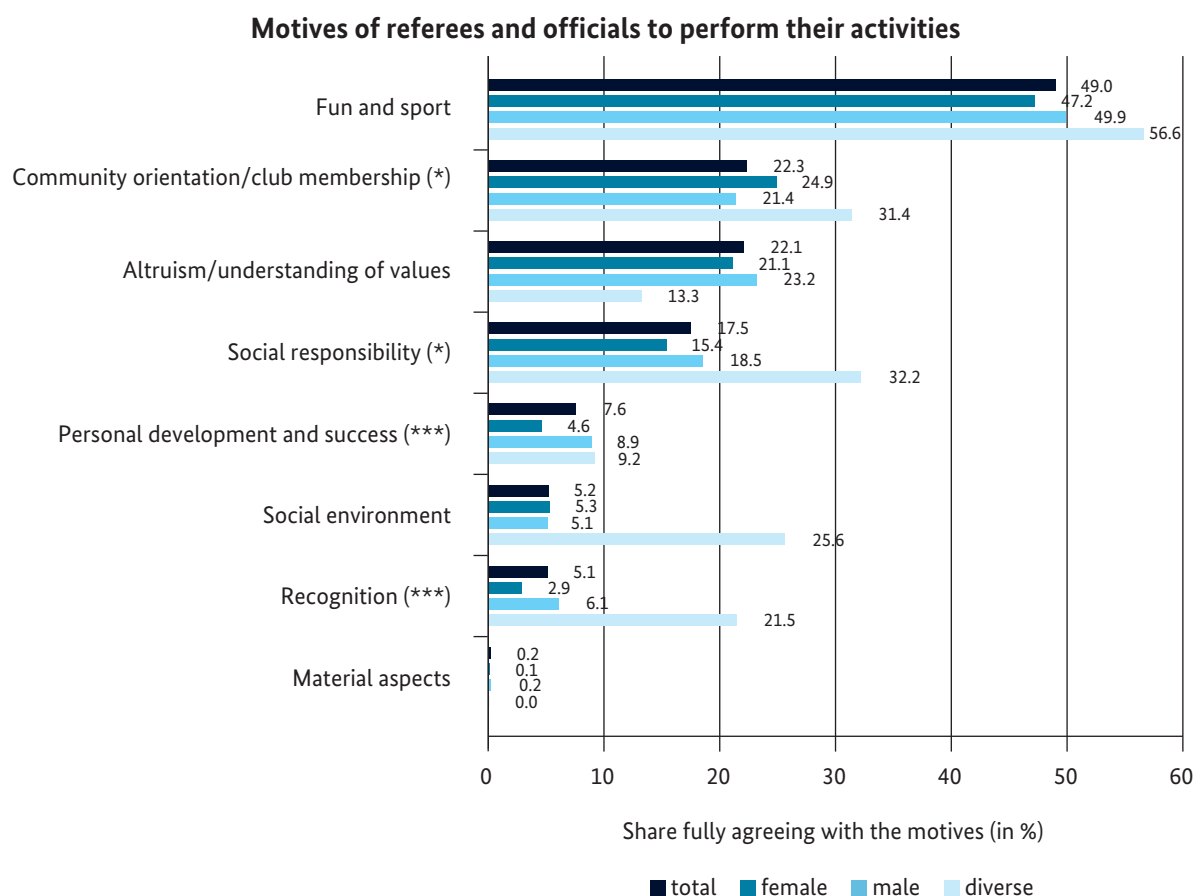


Fig. 13: Motives of the referees and officials, by gender (share of full agreement in %).

9 The group of gender-diverse people only makes up a very small proportion of those involved. Even if some motives are apparently rated more strongly by gender-diverse people compared to males and females, the differences are not statistically significant for any of the motives.

Motives of referees and officials to perform their activities

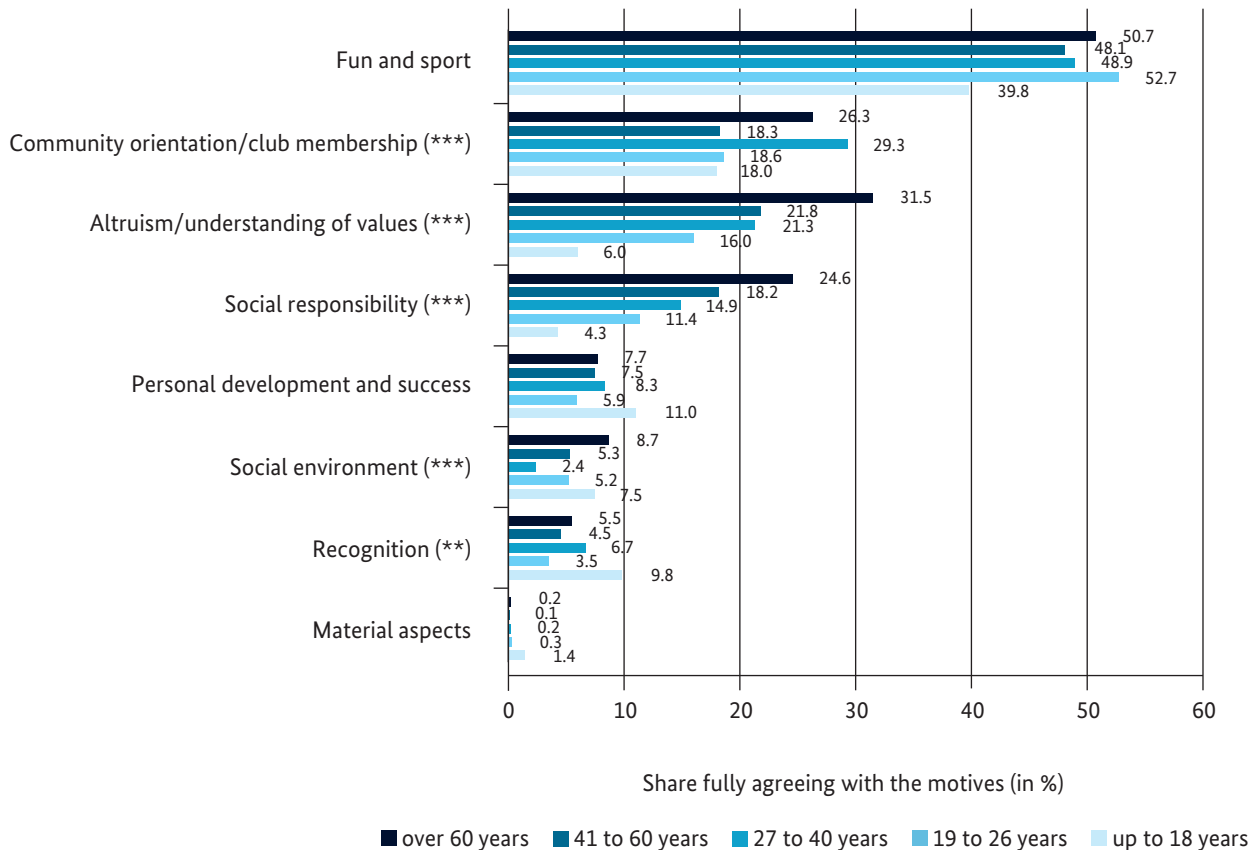


Fig. 14: Motives of the referees and officials, by age group (share of full agreement in %).

ship in a club, approval is greatest in the 27 to 40 age group and differs significantly from the younger and older age groups. A similar picture emerges when it comes to the motive of recognition, with the youngest age group agreeing the most. The social environment plays the most important role for referees and officials over the age of 60 (see Fig. 14).

When looking at the bundle of motives differentiated according to the sports in which the referees and officials work, some differences become apparent. For example, the **fun and sport motive bundle is most pronounced among referees and officials in ju-jitsu, cheerleading, motor sports and dance sports, while referees and officials from gymnastics and table tennis agree the least fully here.** The clus-

ter of motives of community orientation and club membership is most strongly emphasized in cheerleading and least strongly in badminton. Furthermore, referees and officials in taekwondo, rowing and dance sport stated most frequently that they work for altruistic motives. Social responsibility motivates referees and officials in taekwondo, rowing, triathlon and athletics comparatively the most (see Fig. 15).

Personal development and success as well as motives from the social environment are proportionally the most important for referees and officials in taekwondo. **The bundle of motives of recognition, on the other hand, is mentioned most frequently in tennis, and material aspects play the most common role for soccer referees** (see Fig. 16).

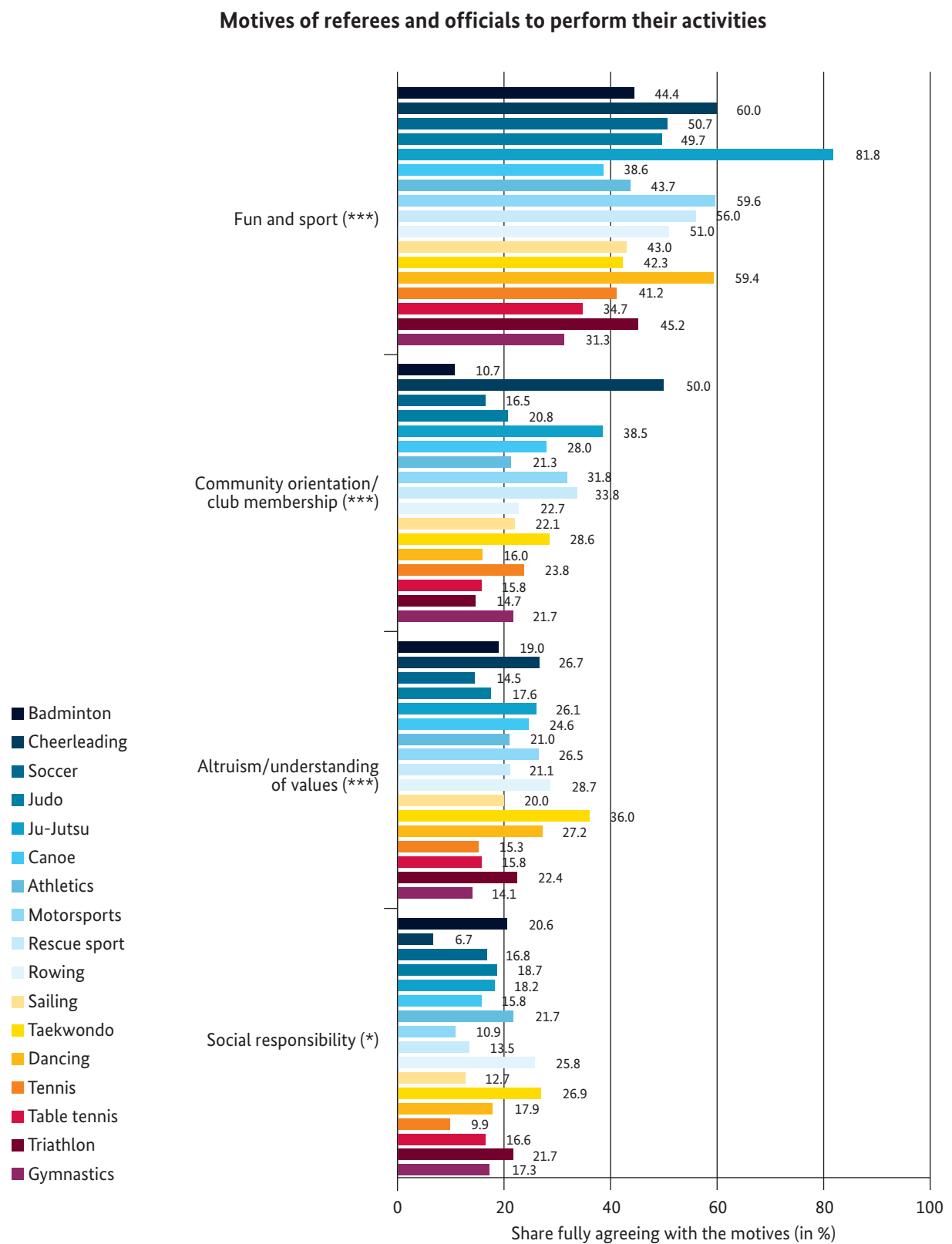


Fig. 15: Motives of the referees and officials, by sport (share of complete agreement in %; part 1).

Motives of referees and officials to perform their activities

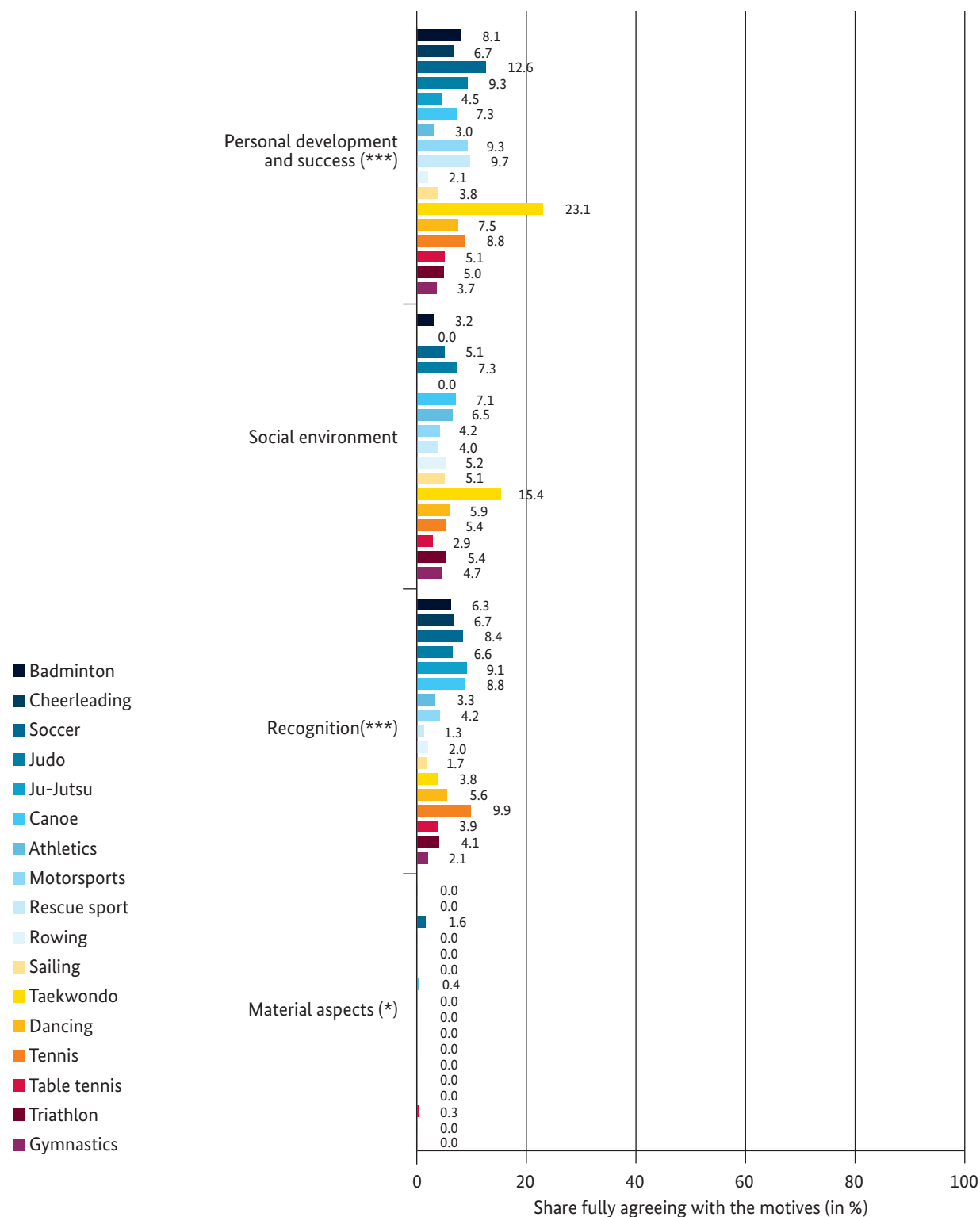


Fig. 16: Motives of the referees and officials, by sport (share of complete agreement in %; part 2).

2.3.3 Conclusion on the motives

In summary, it can be said that the analyses highlight meaningful bundles of motives, some of which confirm existing studies to the extent that the referees and officials, similar to the coaches and trainers (Breuer & Feiler, 2020a), differentiate between community spirit and personal motives (cf. Braun, 2003, 2011; Hoyer et al., 2008). **On the other hand, no independent “sport” motive (type of sport and sporting success) emerged among the referees and officials, unlike among the coaches and trainers. This result makes it clear that although there is a great agreement in most motive bundles between different people involved in sports, differences are also visible.**

2.4 Satisfaction

2.4.1 General satisfaction

In addition to the motives for carrying out their work, the referees and officials were also asked about their satisfaction with their activity. To this end, three questions were asked, each of which was measured on an 11-point scale. First of all, satisfaction with the activity was asked directly (0=“not at all satisfied” to 10=“extremely satisfied”). Furthermore, the probability of recommendation was surveyed (0=“unlikely” to 10=“extremely likely”), and finally, it was asked

whether the referees and officials had ever thought about ending the activity (0=“never” to 10=“very often”).

All in all, the referees and officials were very satisfied with their work on average. On the 11-point scale, the referees and officials gave an average value of $M=8.07$. The probability that the referees and officials would recommend their work to others was also high ($M=7.49$). These results are substantiated by the fact that, **on average, only a small number of referees and officials ($M=3.14$) toyed with the idea of ending the activity.** However, it turns out that **men were on average more satisfied with the activity than women** and would also recommend the activity more strongly on average. In addition, men were less likely to think about quitting than women. These differences are statistically significant, while there are no significant differences in satisfaction with gender-diverse people (see Table 19).

If one looks at general satisfaction differentiated by age group, it can be seen, for example, that **the youngest and oldest referees and officials are generally the most satisfied with their activity.** Job satisfaction is lowest among 27- to 40-year-olds but still quite high on average ($M=7.83$). The probability of recommending the activity to others is also lowest in this group ($M=7.18$) and thoughts of termination occur here most frequently compared to the other age groups ($M=3.49$). However, referees and officials over the age of 60 thought about retiring some-

Table 19: Referee satisfaction with their activity, by gender.

Item	scale	total	gender			Significance
			male	female	diverse	
		mean				
General satisfaction with the activity as referee	0=not at all satisfied; 10=extremely satisfied	8.07	8.18	7.93	7.16	0.000***
Likelihood of recommending the activity as referee	0=unlikely; 10=extremely likely	7.49	7.68	7.23	7.27	0.000***
Consideration of terminating the activity as referee	0=never 10=very often	3.14	2.98	3.32	3.72	0.000***

Tab. 20: Referee satisfaction with their activity, by age group.

Item	Age (in years)					significance
	until 18	19-26	27-40	41-60	over 60	
	mean					
General satisfaction with the activity as referee	8.23	8.04	7.83	8.14	8.45	0.000***
Likelihood of recommending the activity as referee	7.24	7.76	7.18	7.53	8.08	0.000***
Consideration of terminating the activity as referee	2.48	2.35	3.49	2.99	3.10	0.000***

what more often than the youngest volunteers (cf. Tab. 20). **A similar picture in terms of satisfaction, differentiated by age group, was also found among coaches and trainers as well as board members** (cf. Breuer & Feiler, 2020a, b).

If you also look at the satisfaction of the referees and officials, differentiated according to the sports in which the activity is carried out, it can be seen that **referees and officials in taekwondo, rowing and ju-jitsu are the most satisfied on average, while satisfaction in gymnastics, table tennis and judo is on average the lowest (but still quite high)**. The probability of recommendation is also highest in rowing, ju-jitsu and taekwondo. On average, referees and officials in cheerleading, gymnastics, table tennis and soccer would recommend the activity least strongly. **By far most referees and officials from gymnastics thought of retiring**, followed by people involved in table tennis, judo and sailing. **On average, rowing referees think about quitting less frequently** (see Fig. 17).

2.4.2 Satisfaction with individual aspects of the activity

When asked about their satisfaction with individual aspects of the activity, it shows that the referees and officials were mostly satisfied on average (cf. Fig. 18 to Fig. 21). The interviewed referees and officials were most **satisfied with their own performance, the respect of the athletes towards them and the cooperation with**

other referees and officials (see Fig. 18). On the other hand, the satisfaction with the recognition of the activity in the form of certificates, ID cards or similar as well as recognition in the form of honours are less pronounced on average. There are also gender differences here. **Women are significantly less satisfied with recognition services than men. Satisfaction with the financial remuneration for the work performed and tax benefits are lowest on average** (see Fig. 19), although the relevant motives are only slightly pronounced (see above). **Here, too, there are parallels with the coaches and trainers, who were also the least satisfied with tax reductions on average** (Breuer & Feiler, 2020a).

It is noticeable that, on average, the satisfaction of the referees and officials with the professional support of the activity by the association is more pronounced ($M=6.77$) than with the professional support of the activity by the club ($M=5.83$). Here, the coaches and trainers showed a different picture (cf. Breuer & Feiler, 2020a). On the other hand, satisfaction with the club ($M=6.30$) for openness to criticism and suggestions for change is slightly greater among the referees and officials than with the association ($M=5.87$).

Significant differences between the sexes can be seen in some other aspects of satisfaction. For example, there are significant differences between all three groups when it comes to satisfaction with the provision of suitable teaching materials. On average, gender-diverse people

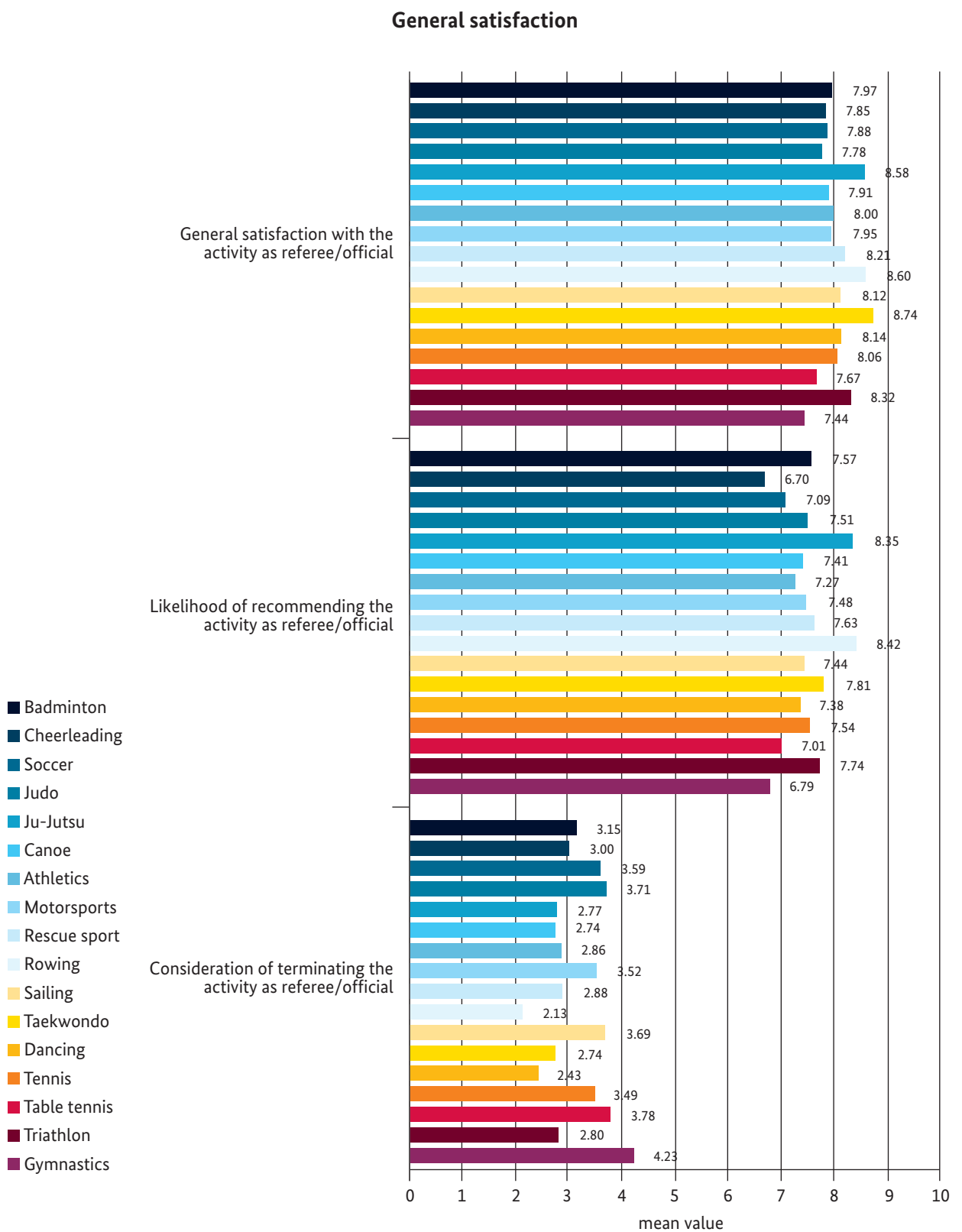


Fig. 17: Referee satisfaction with their activity, by sport.

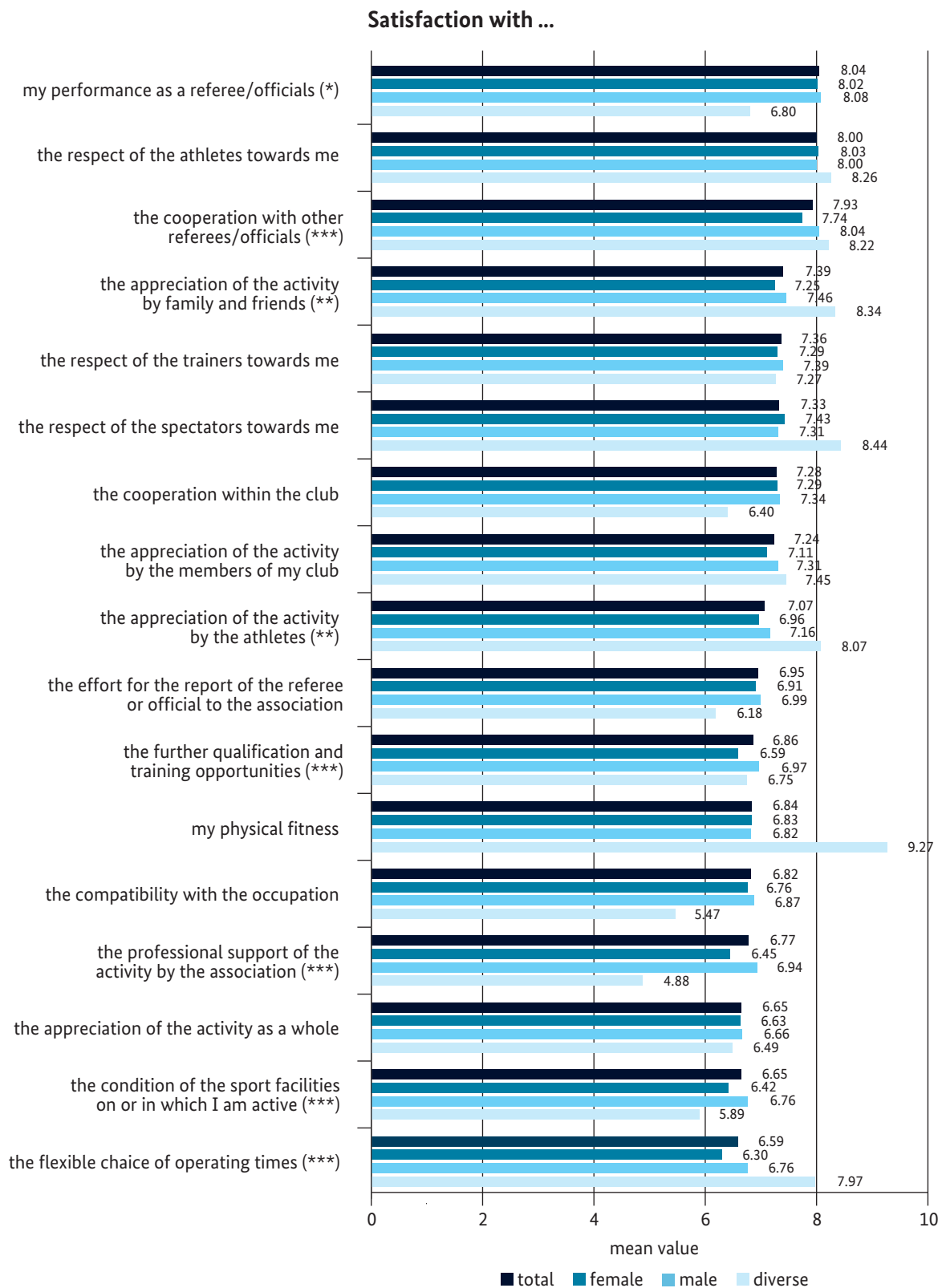


Fig. 18: Referee satisfaction with individual aspects of their activity, by gender (0="not at all satisfied" to 10="extremely satisfied"; part 1).

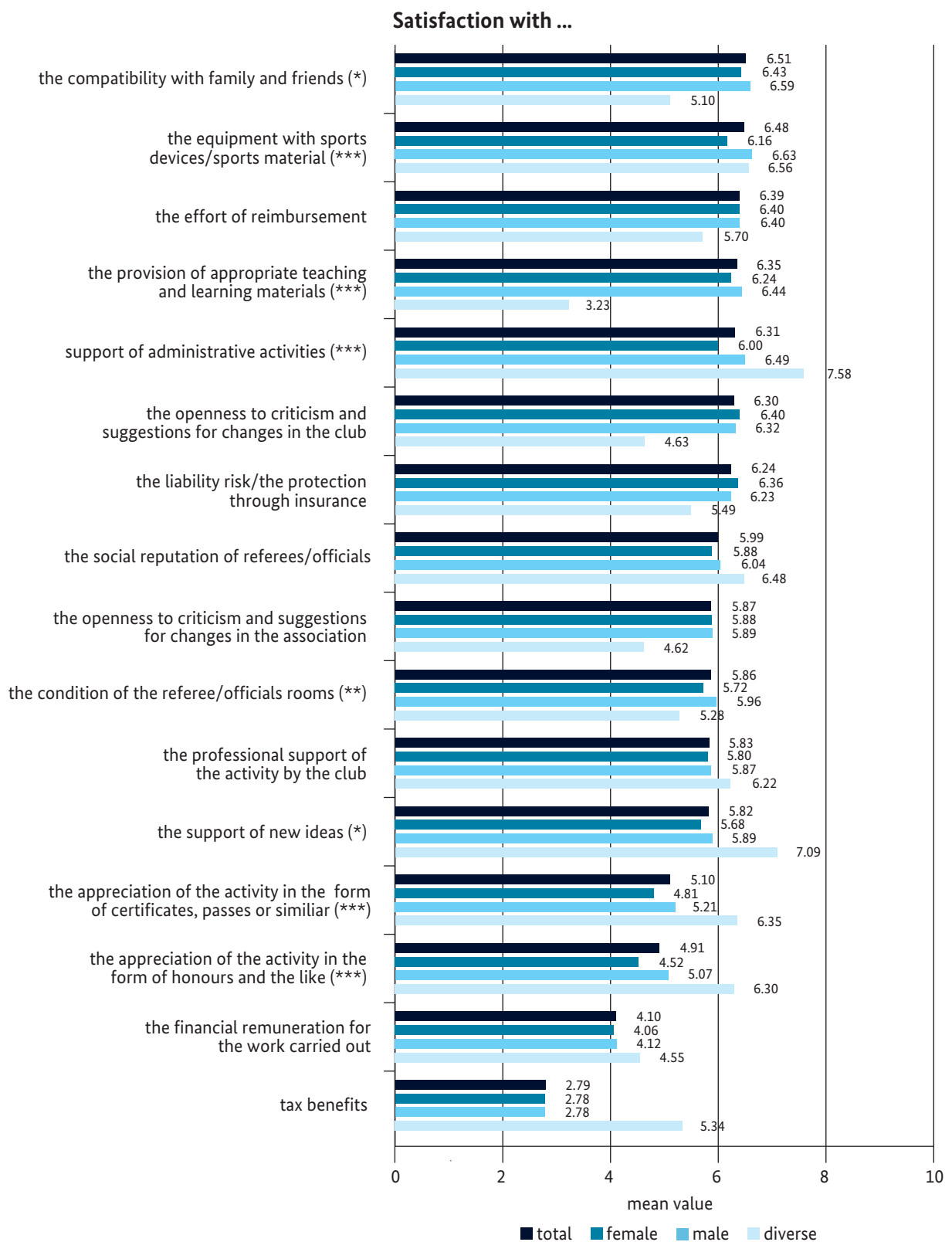


Fig. 19: Referee satisfaction with individual aspects of their activity, by gender (0="not at all satisfied" to 10="extremely satisfied"; part 2).

were the least satisfied, while males were the most satisfied (see Fig. 19). For all other marked significant differences, men were more satisfied than women, while there were no significant differences between gender-diverse people (see Fig. 18 and Fig. 19).

If one looks at the distribution of satisfaction instead of the mean value, i.e. how many referees and officials were less satisfied, moderately satisfied and satisfied with the aspects of their activity, the result becomes even clearer. The referees and officials surveyed were **almost exclusively satisfied with their own performance and the respect of the athletes towards them. More than 90 % agreed to be (rather) satisfied.** More than 80 % of the referees and officials were also (rather) satisfied with the cooperation with other referees and officials, the respect of the trainers and spectators towards them and the recognition of their work by family and friends (see Fig. 20).

On the other hand, more than half of the referees and officials surveyed stated that they were (rather) dissatisfied with the financial remuneration and more than two-thirds were also (rather) dissatisfied with the tax benefits (see Fig. 21).

A differentiated consideration of the satisfaction with individual aspects of the job according to age groups shows some differences (cf. Fig. 22 to Fig. 24). For example, **the average level of satisfaction with the recognition of the activity by athletes increases with age.** A similar picture emerges when it comes to satisfaction with one's own performance. On the other hand, the youngest and oldest referees and officials are, on average, the most satisfied with the recognition of their work by family and friends, members of their own club and recognition through certificates, ID cards or honours. The youngest referees are comparatively more satisfied with the financial reward for the work done and tax benefits. This result with regard to the financial aspects had already been shown by the coaches and trainers (Breuer & Feiler, 2020a) and board members (Breuer & Feiler, 2020b).

A detailed overview of the 33 surveyed aspects of satisfaction differentiated according to the sports in which the referees and officials work can be found in the appendix (cf. Tab. 37 and Tab. 38). This shows, for example, that **the satisfaction of the referees and officials with the respect of the athletes, coaches and especially spectators is clearly the lowest in football on average and in comparison to the other sports.** Furthermore, referees and officials in **motor sports, sailing, gymnastics and football are, on average, the least satisfied with the professional support provided by the association.** In sailing, the cost of reimbursement is also viewed most critically. Triathlon referees are above average satisfied with their financial remuneration.

2.5 Future engagement

In addition to the satisfaction of the referees and officials with their work, the referees and officials were also asked about their future plans with regard to their commitment. This shows **that the majority of the referees and officials were planning to continue their activity at the time of the survey.** On a 5-point scale (from 1="do not agree at all" to 5="completely agree"), the average overall agreement was $M=4.11$ (around 78 % agreement; cf. Fig. 26), what concerns the continuation of the activity in the current season or the current year. The agreement to also work as a referee in the next season or in the next year was even slightly higher ($M=4.30$; cf. Fig. 25). This slightly higher level of approval for the coming season is probably due to the restrictions on games and competitions at the time of the survey due to the corona pandemic. In both of these areas, there are significant differences between the sexes. **Gender-diverse people are the least likely to plan to continue working in the near future as a referee, while men agree significantly more often, also compared to women.** On average, agreement to work as a referee in the medium term, i.e. in three years'

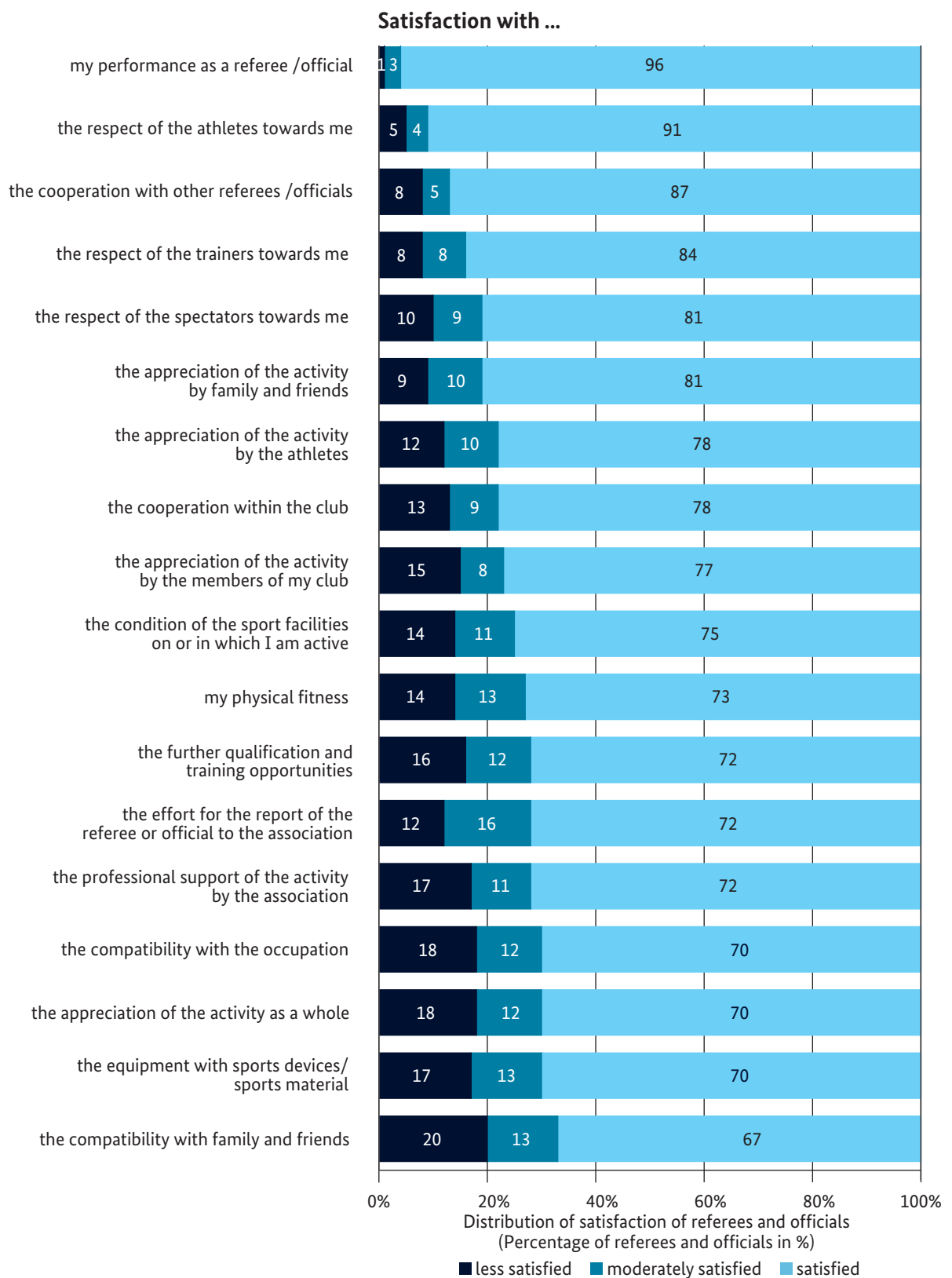


Fig. 20: Distribution of the satisfaction of the referees and officials with individual aspects of the activity (0 to 4="less satisfied"; 5="moderately satisfied"; 6 to 10="satisfied"; part 1).

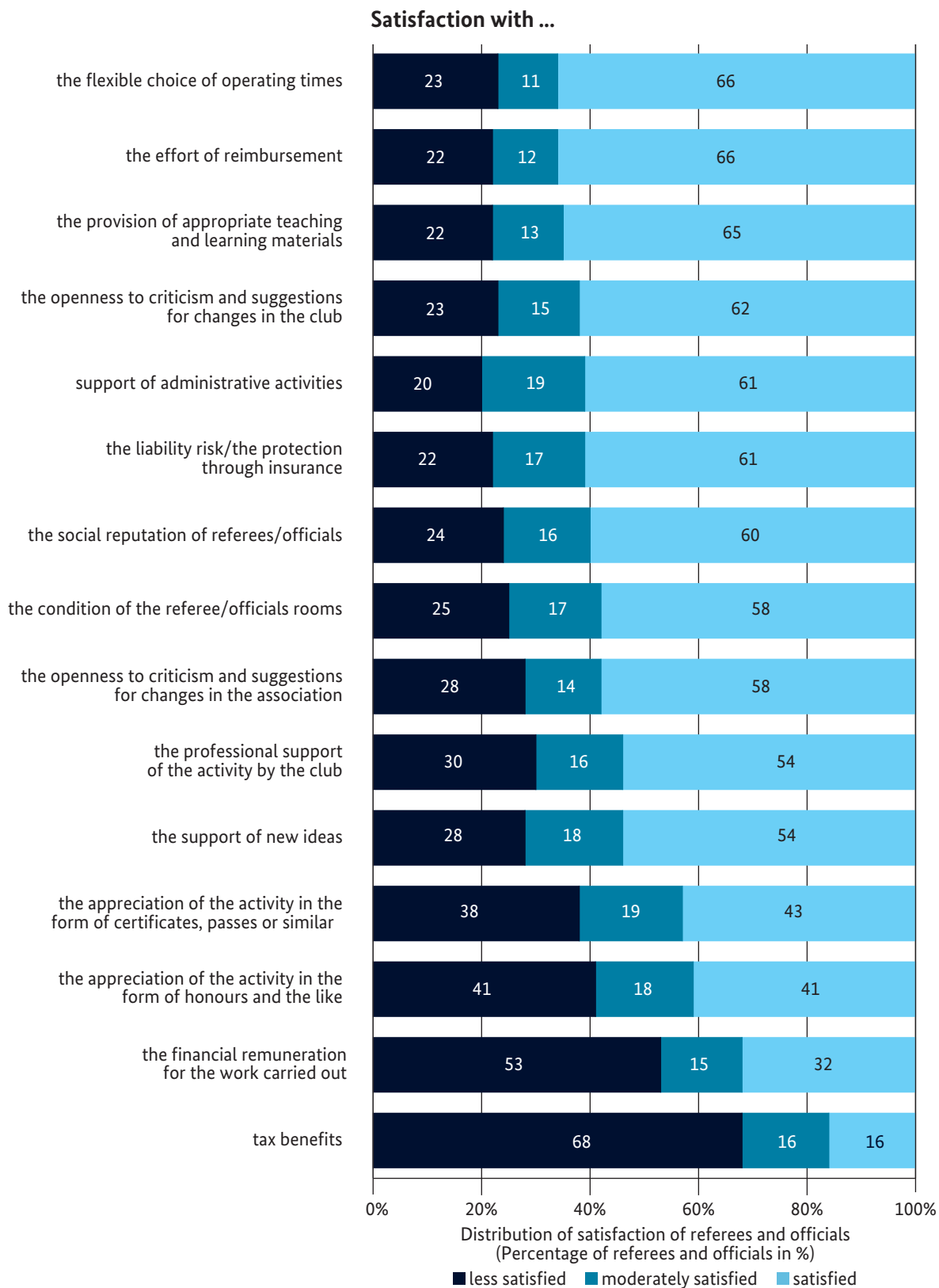


Fig. 21: Distribution of the satisfaction of the referees and officials with individual aspects of the activity (0 to 4="less satisfied"; 5="moderately satisfied"; 6 to 10="satisfied"; part 2).

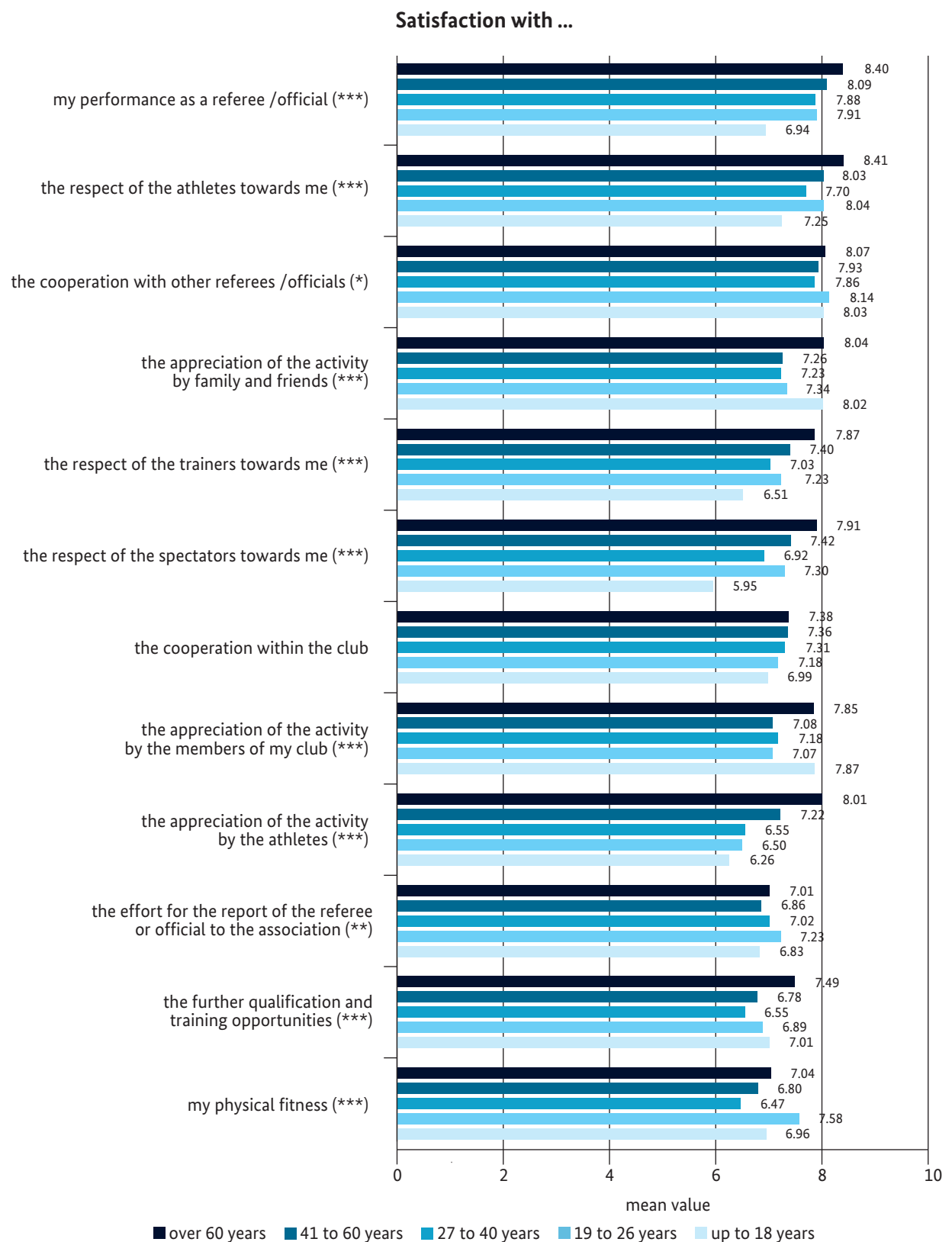


Fig. 22: The satisfaction of the referees and officials with individual aspects of their activity, by age group (0="not at all satisfied" to 10="extremely satisfied"; part 1).

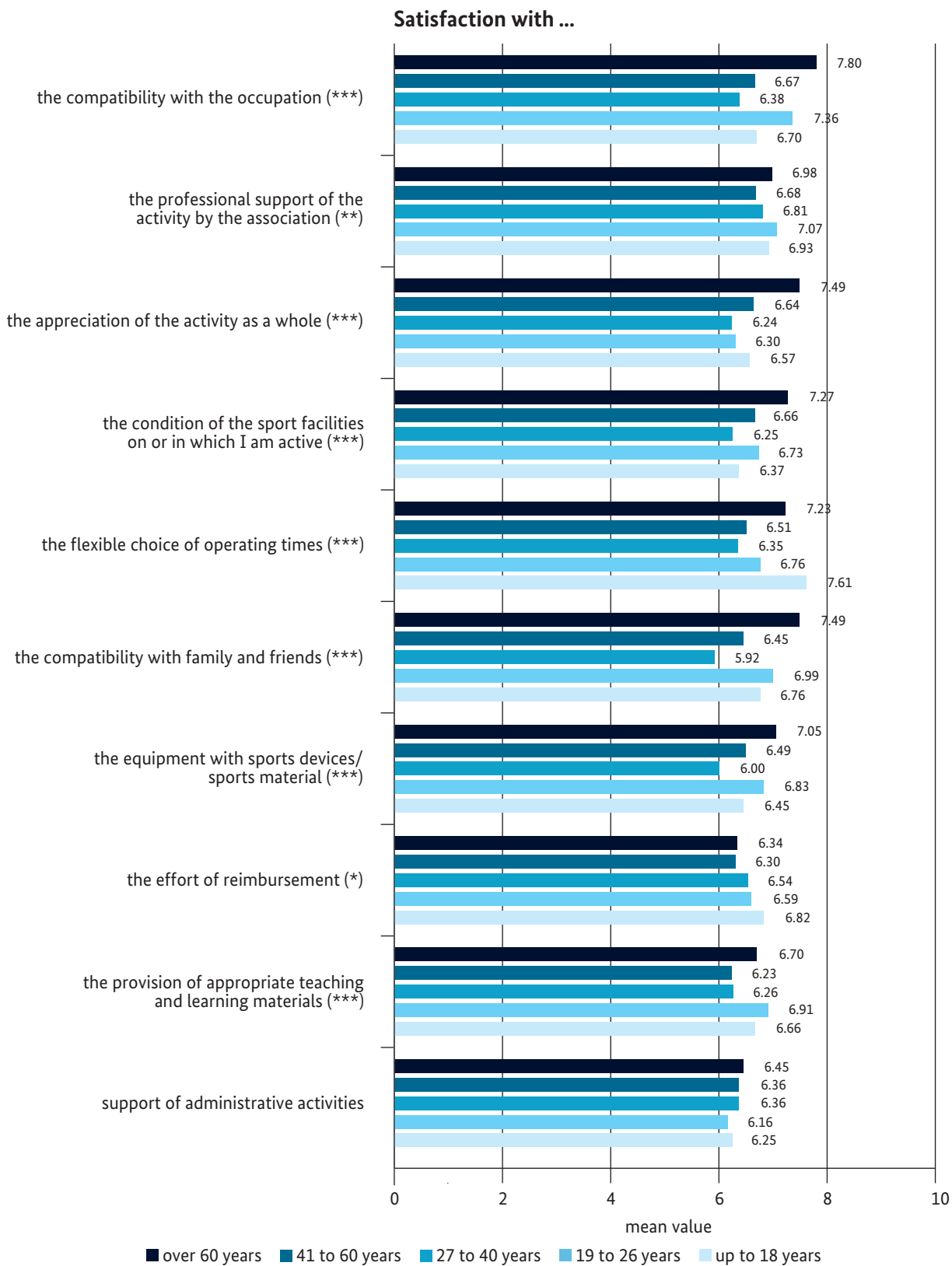


Fig. 23: The satisfaction of the referees and officials with individual aspects of their activity, by age group (0="not at all satisfied" to 10="extremely satisfied"; part 2).

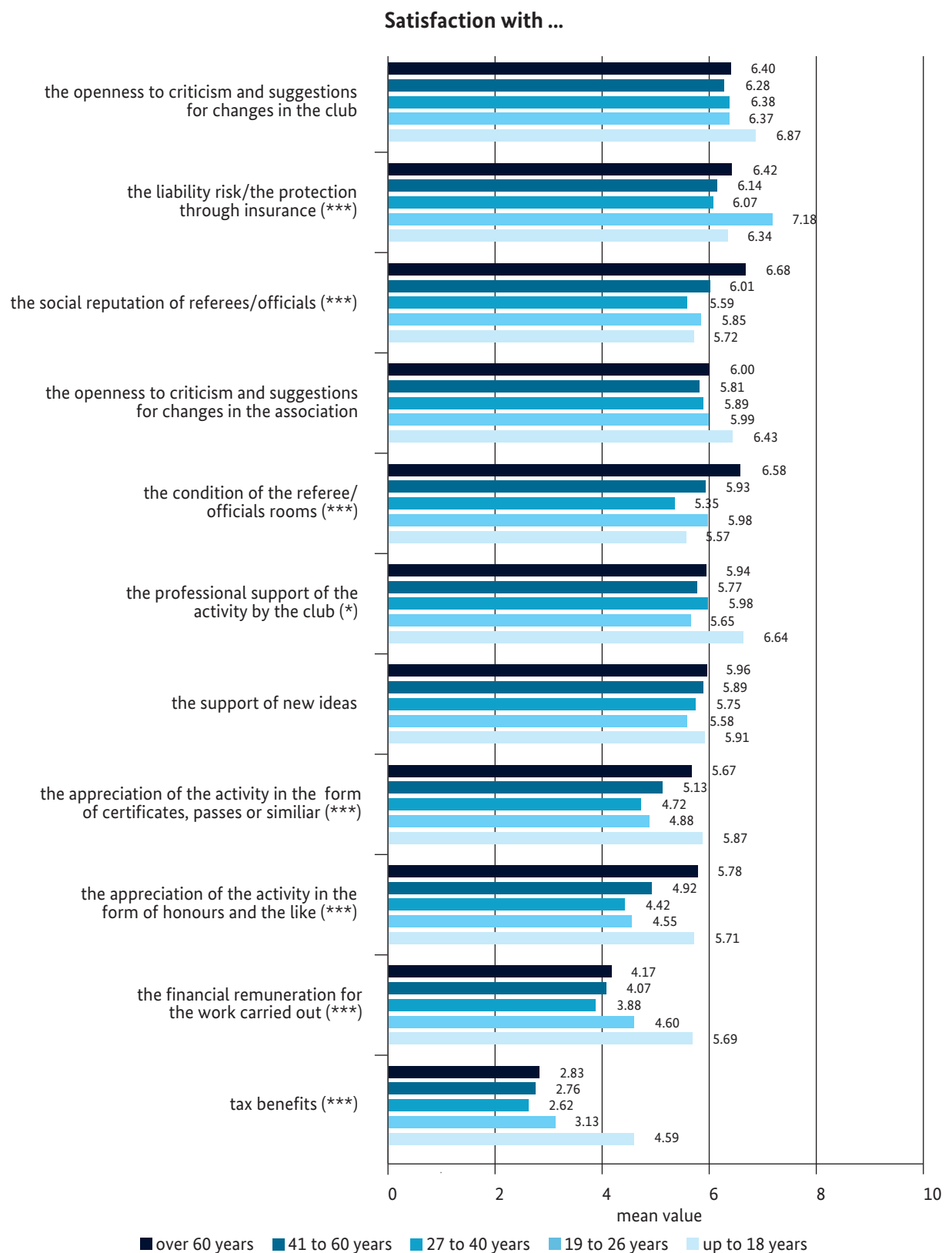


Fig. 24: The satisfaction of the referees and officials with individual aspects of their activity, by age group (0="not at all satisfied" to 10="extremely satisfied"; part 3).

time, is somewhat lower ($M=3.97$). Here the differences between men, who plan to continue working as referees more strongly, and women are significant.

What is striking is the average willingness to undertake further training and qualification for the activity. Almost three-quarters of the referees and officials surveyed stated that they were planning further training for their work in the coming year (cf. Fig. 26)¹⁰. **The mean value here is $M=3.99$ and thus overall above the willingness of the coaches and trainers to further qualify for the activity ($M=3.62$; cf. Breuer & Feiler, 2020a).** Here, too, there are differences between gender-diverse people and both female and male referees and officials. The average

willingness to undergo further training among gender-diverse people is well below the overall average. In addition, gender-diverse people in the role of referee most often think of giving up their job as soon as a replacement is found. Here, however, the differences between the other sexes are not significant, and overall agreement is also rather low ($M=1.70$; cf. Fig. 25).

If one also differentiates the future plans of the referees and officials according to age groups, it becomes apparent that the plans to continue, both in the short and medium term, are most pronounced on average in the 19 to 26 age group. It is noticeable here that the oldest referees and officials plan the least to continue their commitment in the medium term

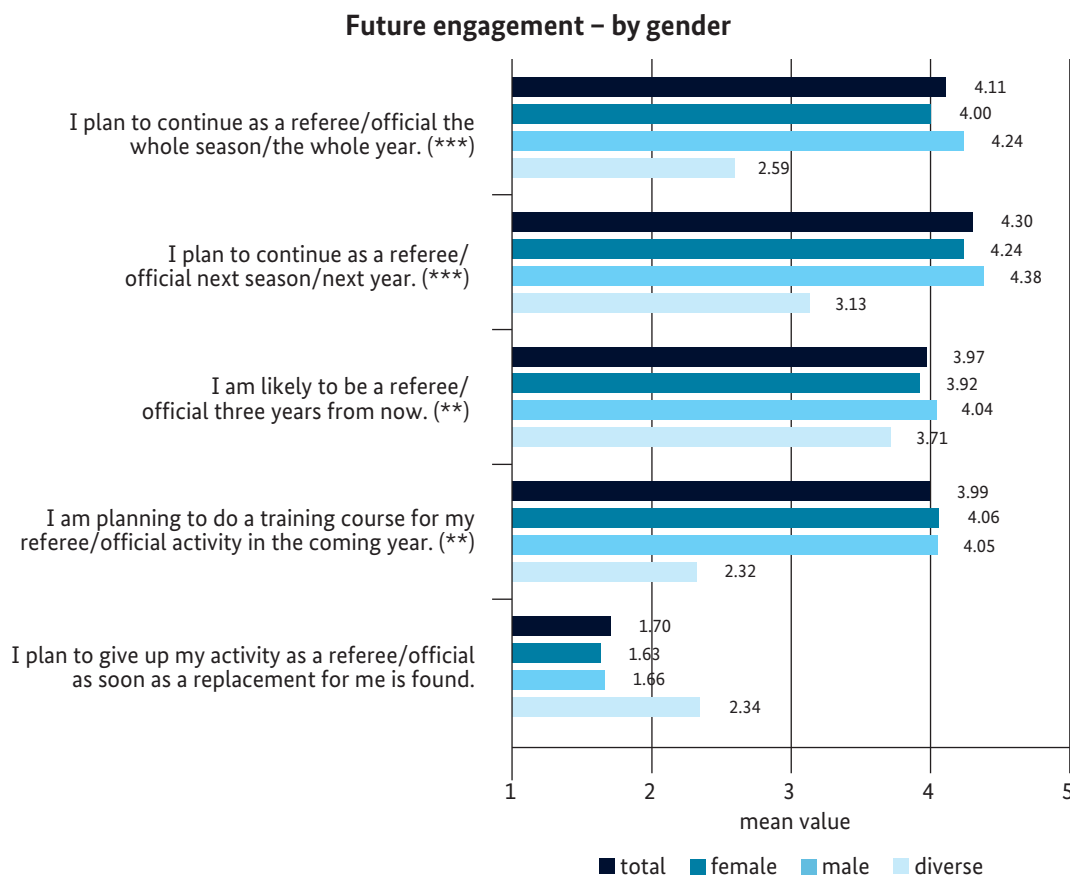


Fig. 25: Agreement of the referees and officials on future engagement, by gender (1="do not agree at all" to 5="agree completely").

¹⁰ However, a selection bias cannot be ruled out here, that rather motivated and committed referees took part in the study, and thus a somewhat too optimistic overall picture is drawn.

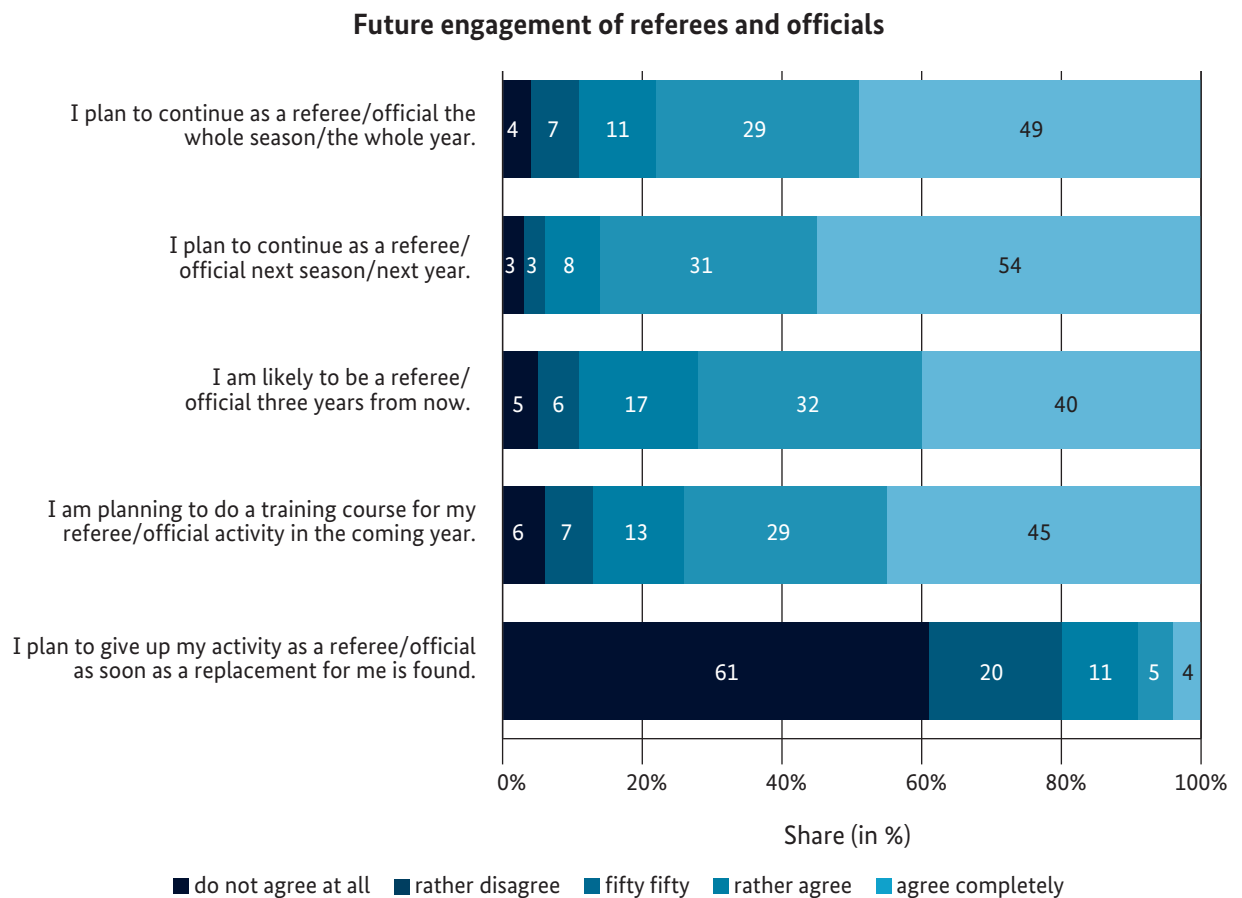


Fig. 26: Distribution of approval for the future engagement of referees and officials.

compared to all younger age groups. With the exception of those aged up to 18, the differences are statistically significant. This also applies to plans by those over 60 to give up their commitment as soon as a replacement has been found. **It, therefore, becomes clear that succession arrangements for the older referees and officials should be addressed in order to counteract the constant problem of retaining and recruiting referees and officials** (cf. Breuer & Feiler, 2021). On average, the willingness to undergo further training is greatest in the age group of 41- to 60-year-old referees and officials (cf. Fig. 27).

A look at the sports in which the referees and officials are engaged also shows some differences with regard to future plans (cf. Fig. 28). For example, referees and officials in gymnastics, athletics and tennis are the least likely to

plan to continue their commitment in the short term. On the other hand, in the medium term, referees and officials in rowing and dance sport most often state that they want to continue their commitment.

On average, the willingness to undergo further training is most pronounced among referees and officials in taekwondo, ju-jitsu and dance sport, while those involved in badminton, athletics and football are the least planning to qualify further for their referee activity in the coming year (see Fig. 28).

On average, referees in gymnastics and motor sports most often plan to give up their activity as referees as soon as a replacement has been found. Referees in rowing, dance sport and cheerleading had such plans least often (cf. Fig. 28).

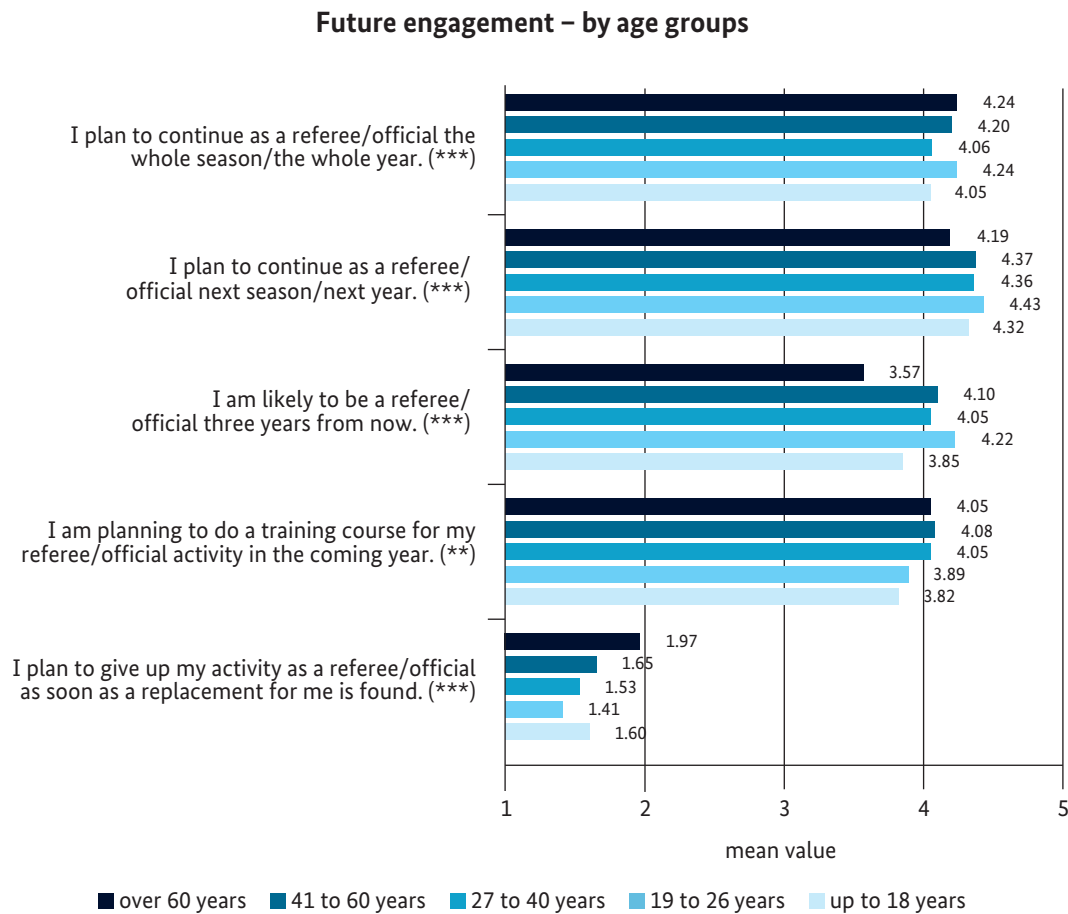


Fig. 27: Agreement of the referees and officials on future engagement, by age group (1="do not agree at all" to 5="agree completely").

2.6 Compensations

2.6.1 Expense allowances

Irrespective of the relatively low importance of the monetary consideration as an incentive for engaging as a referee (cf. Section 2.3.1), **almost 72 % of the referees stated that in 2019, i.e. in the year before the Corona-Pandemic having received an expense allowance (EA).** Differenti-

ated by gender, 72.8 % of the men, 67.5 % of the women and 68.4 % of the gender-diverse referees and officials received an expense allowance. The difference between men and women is statistically significant (see Tab. 21).

In addition, there are statistically significant differences in the receipt of an expense allowance by age group. **The proportion of referees and officials who have received an expense allowance decreases with increasing age** (cf.

Tab. 21: Expense allowance received in 2019, by gender.

	Total	Gender			Significance
		male	female	diverse	
	Share (in %)				
Received expense allowance in 2019	71.8	72.8	67.5	68.4	0.000***

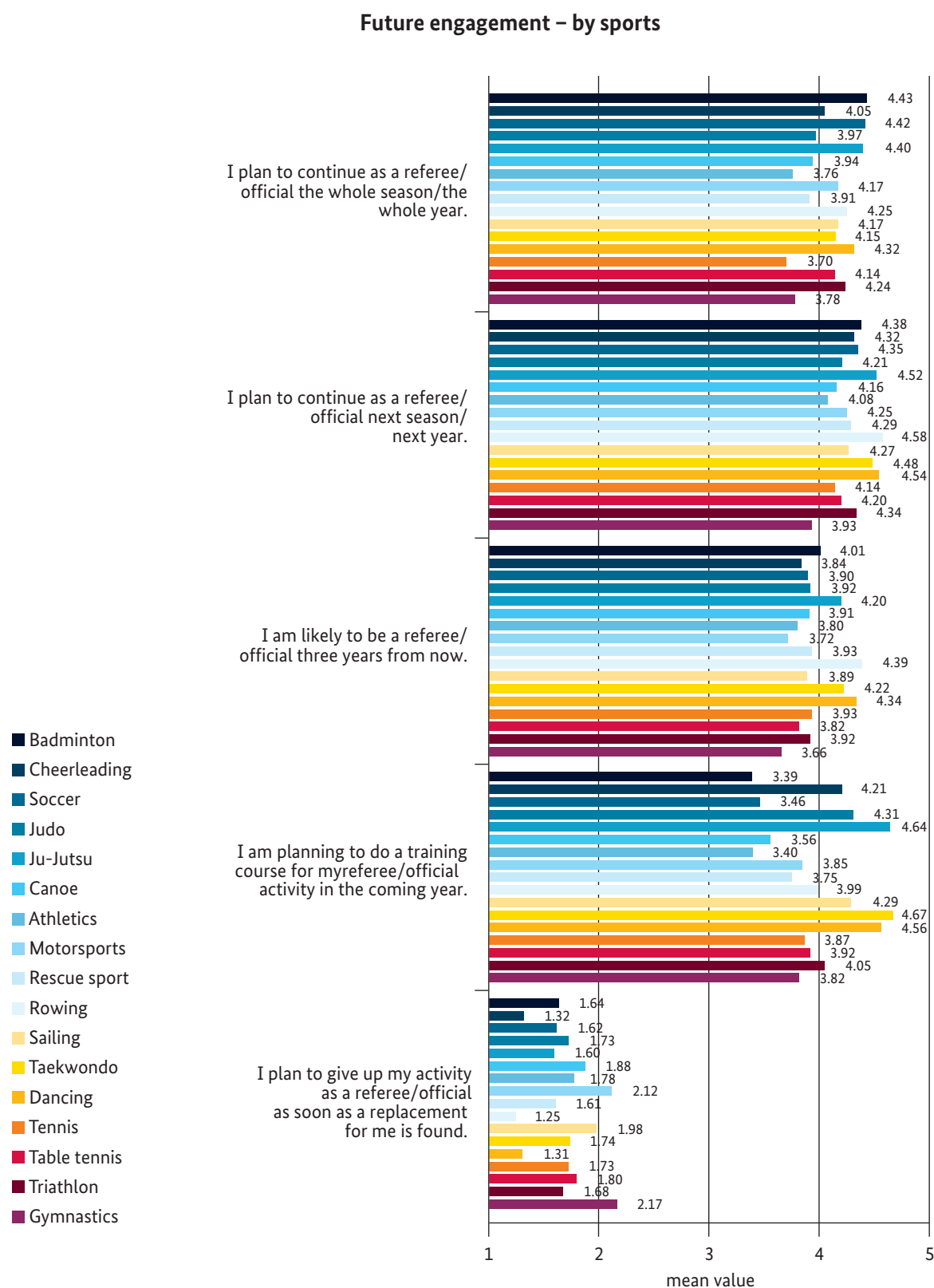


Fig. 28: Agreement of the referees and officials on future engagement, by sport (1="do not agree at all" to 5="agree completely").

Tab. 22: Expense allowance received in 2019, by age group.

	Age (in years)					Significance
	until 18	19-26	27-40	41-60	over 60	
	Share (in %)					
Received expense allowance in 2019	80.8	78.0	74.5	69.7	66.2	0.000***

Tab. 22). The differences between the over-40-year-olds and the two younger age groups are statistically significant. This result corresponds to the result that the two youngest age groups are the most satisfied with the financial remuneration for the work done (cf. Section 2.4.2).

If one looks at the receipt of expense allowances according to the sport in which the referees are active, some differences become apparent. While all interviewed referees and officials in ju-jutsu and taekwondo stated that they had received an expense allowance in 2019, and this applies to more than 90 % of the referees and officials in table tennis, judo, football and badminton, in rescue sports (14.1 %) and sailing (16.9 %) significantly fewer referees and officials receive compensation. In rowing and judo, too, less than 40 % or less than half of the referees and officials received compensation for their work in 2019 (see Tab. 23).

Tab. 23: Expense allowance received in 2019, by sport.

Sport	Received expense allowance in 2019 (Share in %)
TOTAL	71.8
Badminton	92.2
Cheerleading	76.5
Soccer	93.5
Judo	94.0
Ju-Jutsu	100.0
Canoe	46.7
Athletics	68.0
Motorsports	67.3
Rescue sport	14.1

Sport	Received expense allowance in 2019 (Share in %)
Rowing	37.8
Sailing	16.9
Taekwondo	100.0
Dancing	88.3
Tennis	77.2
Table tennis	95.2
Triathlon	89.9
Gymnastics	60.1

The distribution of the expense allowance of the referees and officials shows that around 70 % of all referees and officials (including those who did not receive an expense allowance) received an expense allowance of up to € 200 in 2019. Around 16 % received between € 201 and € 500, and around 3 % each received between € 501 and € 720 and between € 721 and € 1,000. Around 6 % received between € 1,001 and € 2,400, while only around 2 % received more than € 2,400 (see Fig. 29).

Cumulatively, 89.3 % of the referees and officials stated that they had received an expense allowance of up to € 720, i.e. the amount of the volunteer allowance, and 98.3 % received a maximum of up to € 2,400, i.e. the amount of the trainer allowance (flat rate allowance for coaches and trainers) (cf. Fig. 29).

Looking only at those referees and officials who received compensation, around 46 % stated that they received up to € 200 at most, and around 30 % received between € 201 and € 500. Around one in ten has between € 1,200 and € 2,400 received. Only around 3 % received more than € 2,400 in 2019 (see Fig. 29).

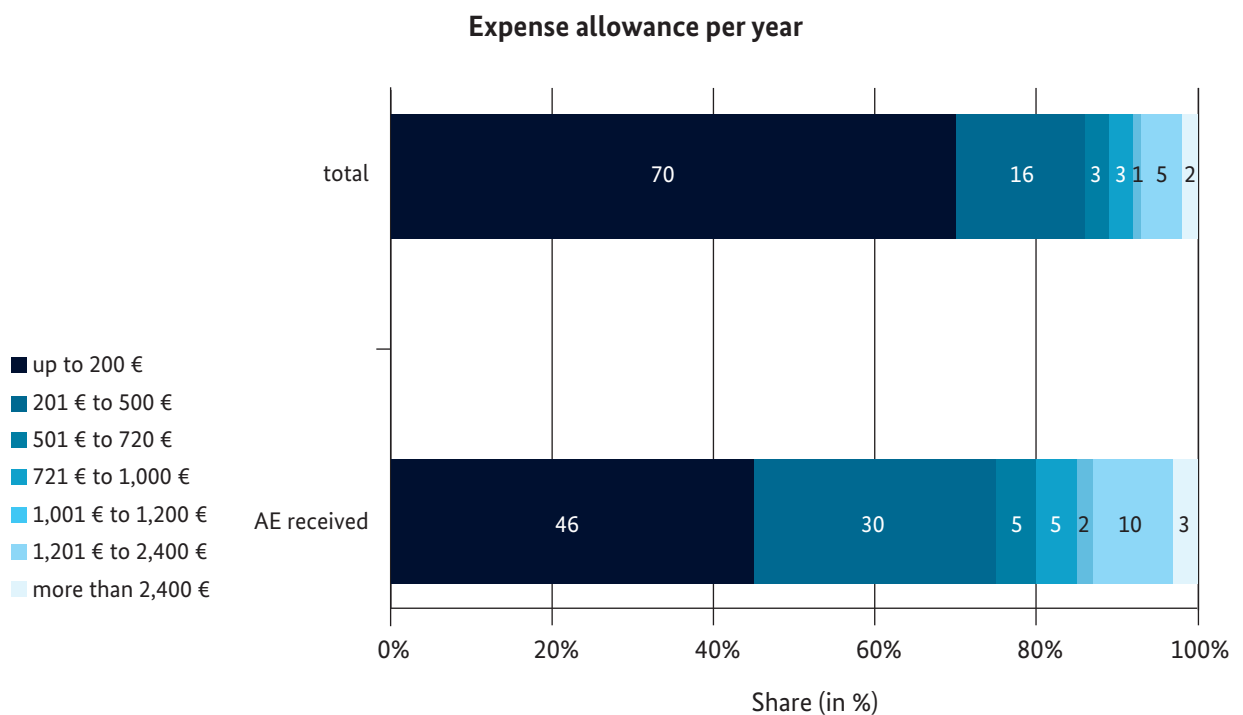


Fig. 29: Distribution of the expense allowance (EA) of the referees and officials in 2019.

If one differentiates according to the sports in which the referees and officials are active (related to all referees and officials, including those who have not received an expense allowance), then there are also some differences with regard to the amount of the expense allowance. **It is striking, among other things, that more than 90 % of the referees and officials in sailing, rescue sports, canoeing, rowing, gymnastics and athletics received up to a maximum of € 200 as expense allowance for their work in 2019.** On the other hand, only referees and officials in tennis, ju-jutsu, football, dance, sailing and athletics received more than € 2,400, whereby this applied to less than 2 % in dance sports, sailing and athletics. **In tennis, more than 15 % of the referees and officials received an expense allowance of more than € 2,400 in 2019** (see Fig. 30).

On average, the total expense allowance (i.e. across all referees including those who did not receive an expense allowance) was **around € 395 for 2019 or around € 36 per referee as-**

signment. However, the median shows that half of the referees and officials received a maximum of € 40 in compensation for activity in 2019 (see Tab. 24).

If you only look at the referees and officials who stated that they received an expense allowance in 2019, the average is around € 721 for the entire year or just under € 59 per assignment (see Tab. 24).

If one differentiates the consideration of those referees and officials who received an expense allowance by gender, it shows that men received an expense allowance of almost € 820 on average in 2019, while the average compensation for women was around € 460 total. The difference is statistically significant (see Tab. 26). **However, there are no differences between the sexes per assignment, so there are no indications of a gender pay gap with regard to compensation payments in German refereeing.**

The differentiation by age group shows that in 2019 young people up to the age of 18 received the lowest compensation on average

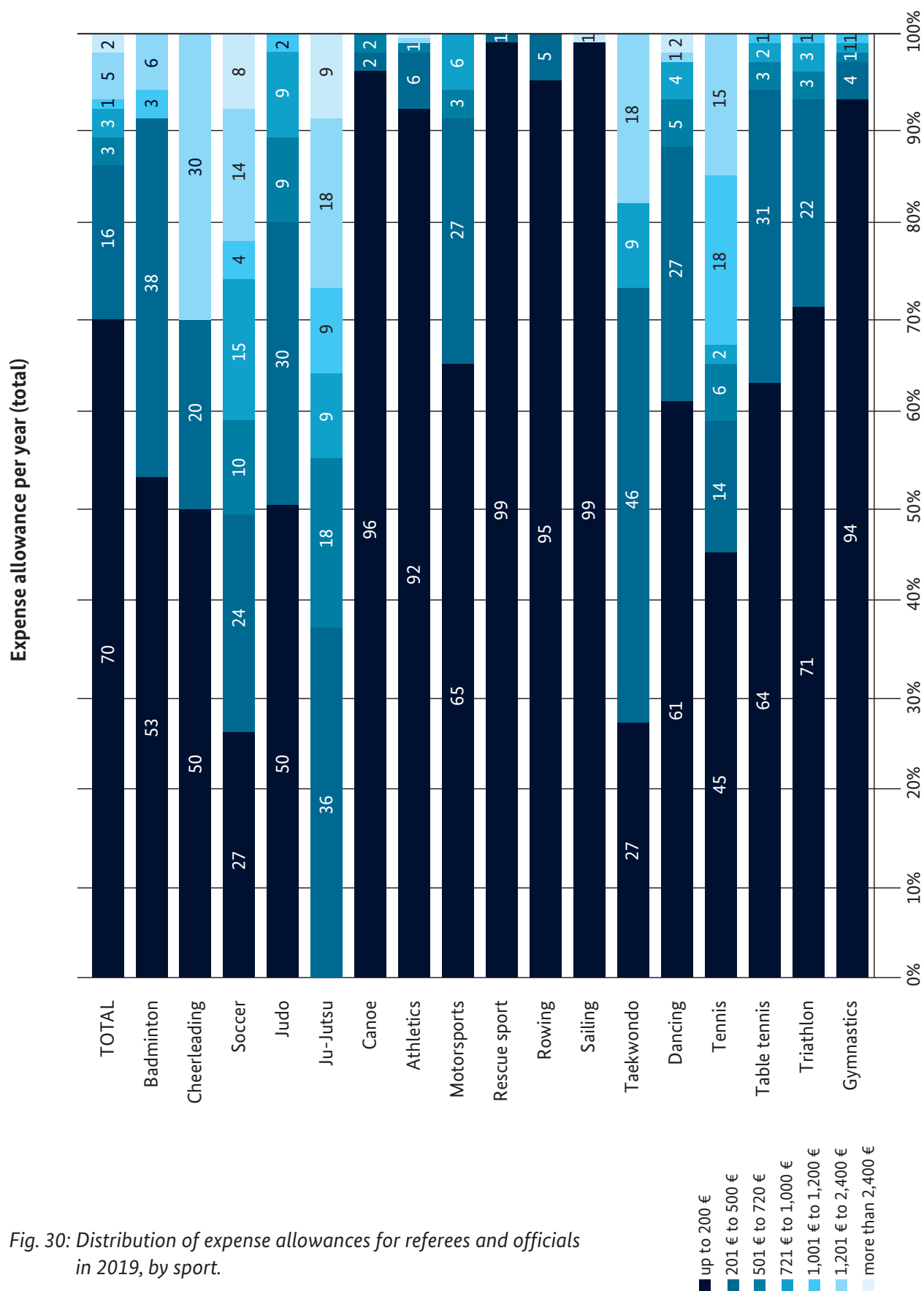


Fig. 30: Distribution of expense allowances for referees and officials in 2019, by sport.

Tab. 24: Amount of the expense allowance (EA) of the referees and officials per year or per assignment in 2019.

	Total		If EA received	
	mean	median	mean	median
	in €		in €	
Expense allowance in 2019	395	40	721	250
Expense allowance per assignment	36	18	59	35

Tab. 25: Average level of compensation for expenses of the referees and officials (if received EA), by gender (n.a.=no information available; n.s.=not significant).

	Gender			Significance
	male	female	diverse	
	Mean value in €			
Expense allowance in 2019	816	457	n.a.	0.039*
Expense allowance per assignment	59	59	n.a.	n.s.

compared to the other age groups, while the age group of 27- to 40-year-olds received the highest compensation on average. This compensation was significantly higher in comparison to referees and officials over 60 years of age. The compensation per assignment shows that the 27- to 60-year-olds received the highest amount (€ 67) on average (cf. Tab. 26).

If one also considers the average amount of compensation for all referees and officials, differentiated by sport, it can be seen that **tennis referees and officials received by far the highest average expense allowance per year (€ 2,695), followed by soccer referees (€ 1,280). On the other hand, the average expense allowance in rescue sports (€ 7) was very low** (see Tab. 27).

Tab. 26: Average amount of the expense allowance of the referees and officials (if EA received), according to age groups.

	Age (in years)					Significance
	until 18	19-26	27-40	41-60	over 60	
	Mean value in €					
Expense allowance in 2019	264	660	1,151	663	367	0.020*
Expense allowance per assignment	22	33	67	67	37	0.000***

Tab. 27: Amount of the expense allowance in 2019, by sport.

Sport	Measured value	Total		If EA received	
		EA in 2019 (in €)	EA per assignment (in €)	EA in 2019 (in €)	EA per assignment (in €)
Badminton	mean	323	37	383	42
	median	175	35	250	40
Cheerleading	mean	625	93	1,042	146
	median	250	120	975	150
Soccer	mean	1,280	32	1,491	36
	median	500	23	625	25
Judo	mean	294	26	351	28
	median	200	25	300	25
Ju-Jutsu	mean	943	158	943	158
	median	700	100	700	100
Canoe	mean	56	5	147	20
	median	0	0	100	18
Athletics	mean	83	9	175	15
	median	0	6	80	12
Motorsports	mean	197	50	371	91
	median	92	24	320	50
Rescue sport	mean	7	1	88	20
	median	0	0	60	20
Rowing	mean	37	6	130	28
	median	0	0	135	20
Sailing	mean	37	0	346	3
	median	0	0	10	0
Taekwondo	mean	608	83	608	83
	median	400	75	400	75
Dancing	mean	401	30	511	36
	median	150	25	200	30
Tennis	mean	2,695	61	4,243	90
	median	360	80	1,375	90
Table tennis	mean	206	26	229	28
	median	150	25	160	25
Triathlon	mean	200	40	241	47
	median	150	50	172	50
Gymnastics	mean	62	10	150	20
	median	0	0	50	15

2.6.2 Travel expenses

In addition to an expense allowance for their engagement, some of the referees and officials also received **separate reimbursement for the travel expenses incurred. In 2019, this applied to almost two-thirds of the referees and officials**, with gender-diverse people reporting significantly less frequently (11.7 %) that they had received reimbursement of travel expenses than men (66.1 %) and women (63.2 %). There are also significant differences between the age groups. Compared to all other age groups, the 27- to 40-year-olds received the most frequent reimbursement of travel expenses (73.4 %), while this applies the least to the youngest (48.9 %) and oldest (58.3 %) referees. Around 64 % of the 19- to 26-year-olds and 41- to 60-year-olds each received reimbursement for travel expenses.

When travel expenses were reimbursed, they averaged around € 370, with men receiving an average of € 407 and women € 262. This difference is statistically significant, as are differences in the amount of reimbursed travel expenses between different age groups of refer-

ees and officials. On average, 27- to 40-year-old referees and officials received the highest reimbursement of travel expenses (€ 423), while 19- to 26-year-olds received significantly less (€ 236). The reimbursement of travel expenses was lowest for those up to the age of 18, which may also have something to do with the fact that some of them do not yet have a driver's license.

If you also look at the sports in which the referees and officials work, travel expenses were reimbursed most frequently to referees and officials in ju-jitsu (90.9 %), followed by those involved in cheerleading (80 %), table tennis and judo (both 77.7 %) and taekwondo (76.9 %). On the other hand, referees and officials in sailing (26 %), athletics (44.3 %) and canoeing (44.8 %) were the least likely to receive reimbursement for travel expenses (see Tab. 28).

In the case of reimbursement of travel expenses, this was, on average highest for referees and officials in tennis, motorsports and sailing. In contrast, referees and officials in athletics, table tennis, gymnastics, canoeing, triathlon and rescue sports received lower reimbursements on average (cf. Tab. 28).

Tab. 28: Travel expenses reimbursed separately in 2019, by sport.

Sport	Travel expenses separately reimbursed (share in %)	When received: Amount of reimbursement for travel expenses	
		mean (in €)	median (in €)
TOTAL	65.3	369	200
Badminton	71.4	447	250
Cheerleading	80.0	292	325
Soccer	62.4	480	241
Judo	77.7	309	200
Ju-Jitsu	90.9	492	500
Canoe	44.8	211	165
Athletics	44.3	176	88
Motorsports	55.3	699	350
Rescue sport	64.0	218	150
Rowing	72.6	325	250
Sailing	26.0	674	200

Sport	Travel expenses separately reimbursed (share in %)	When received: Amount of reimbursement for travel expenses	
		mean (in €)	median (in €)
Taekwondo	76.9	306	225
Dancing	58.4	328	200
Tennis	68.2	854	300
Table tennis	77.7	192	120
Triathlon	70.7	216	90
Gymnastics	57.3	206	100

2.7 Sociodemographic Background

In the introduction (cf. Section 2.1) it was already shown that more men (70.6 %) than women (29.3 %) took part in the survey. Gender-diverse people accounted for 0.1 %. The average age was 42 years for women, 48.7 years for men and 43.6 years for gender-diverse people. In the following, you will find further characteristics of the socio-demographics of the referees and officials involved.

2.7.1 Migration background

Almost 8 % of the participating referees and officials said they had a migration background¹¹. However, there are big differences between the sports. Almost 39 % of the referees and officials in taekwondo had a migration background, while this applied to only 1.7 % in sailing (cf. Tab. 29).

Tab. 29: Referees and officials with a migration background.

Sport	Migration background (share in %)
TOTAL	7.9
Badminton	4.8
Cheerleading	14.3
Soccer	11.7
Judo	8.3

Sport	Migration background (share in %)
Ju-Jitsu	9.1
Canoe	3.6
Athletics	2.1
Motorsports	2.2
Rescue sport	2.7
Rowing	2.1
Sailing	1.7
Taekwondo	38.5
Dancing	7.7
Tennis	7.0
Table tennis	3.7
Triathlon	3.6
Gymnastics	11.7

Compared to the general population, people with a migration background are underrepresented in the present dataset. It turns out that more than a quarter of the population living in Germany (27.2 %) had a migration background in 2021 (Statistisches Bundesamt, 2022b).

2.7.2 Education and training

A total of 13.1 % of the referees and officials stated that they were still in training, with significant differences between the sexes showing up here. Among male referees and officials, the

¹¹ Based on the definition of the Federal Statistical Office (Statistisches Bundesamt, 2022b), there is a migration background if the person or at least one parent was not born with German citizenship.

percentage of those in training is 10.4 %, among females 19.5 % and among gender diverse 2.5 %. The differences between men and women are statistically significant.

As far as the educational qualifications of the referees and officials are concerned, the overall level of education is very high. A good half of the referees and officials (50.1 %) have a university or technical college degree. A further 16 % have a general higher education entrance qualification, i.e. they have A-Levels, and 11 % have a technical college entrance qualification. Just under 15 % state the intermediate school leaving certificate as the highest level of education, and just under 4 % have completed secondary school. Only very few (0.3 %) of the referees and officials participating in the survey have no educational qualifications (see Fig. 31).

Differentiated according to the sports in which the referees and officials work, it is noticeable that the level of education of the referees and

officials in rowing and sailing is particularly high. Around three-quarters have a university or technical college degree. This applies to a good two-thirds of the referees and officials in ju-jitsu. On the other hand, more than a quarter of the referees and officials working in motorsports and football state that they have the intermediate school leaving certificate as the highest level of education. Referees and officials who have completed secondary school as the highest educational level are most common in football (12 %; cf. Fig. 32).

2.7.3 Working and care time

When asked about their weekly working hours (outside their work as referees and officials), the referees and officials stated an average working time of 37.7 hours, with the male referees working an average of 38.4 hours, averaging 36.2 hours for females and 30.2 hours for gender-diverse individuals. Overall, half of the referees

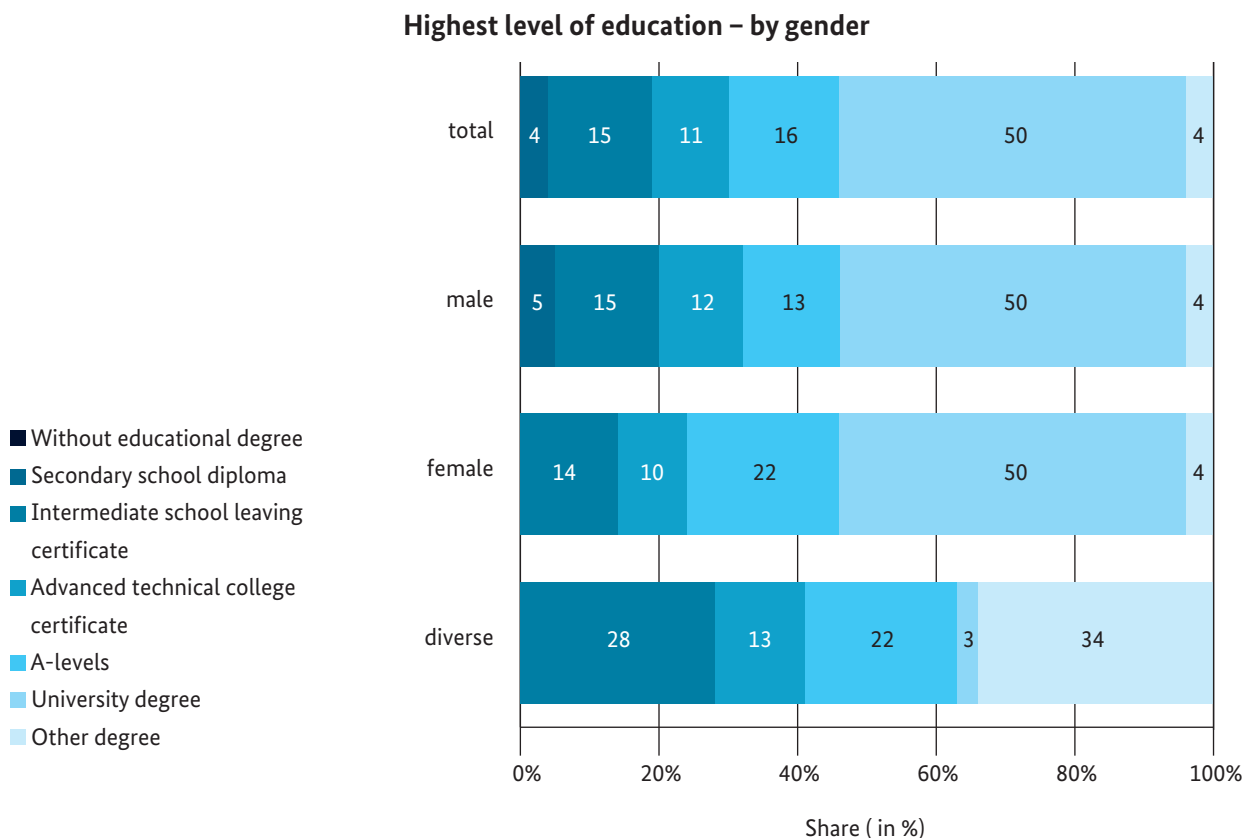


Fig. 31: Highest level of education of referees, by gender (share in %).

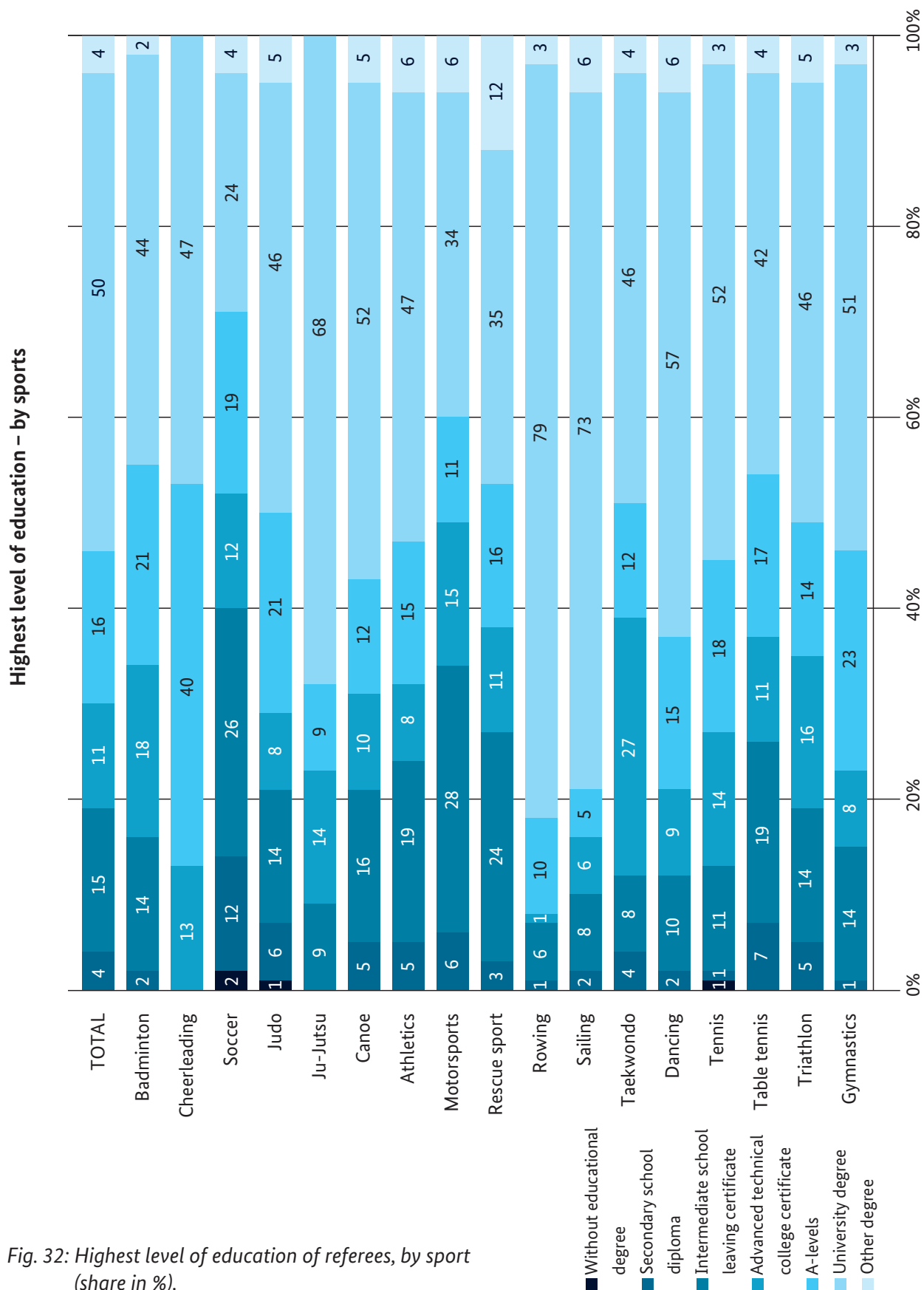


Fig. 32: Highest level of education of referees, by sport (share in %).

and officials indicated a maximum working time of up to 40 hours. This amount of time corresponds to a full-time job. Furthermore, 2.7 % of the referees and officials stated that they were on short-time work (at the time of the survey).

In addition, the referees and officials spend an average of 10.6 hours a week looking after children and/or relatives in need of care, with women investing significantly more time here (14.1 hours) than men (9.0 hours).

2.7.4 Household size

On average, the referees and officials live in a household with 2.5 people, with half of the referees living in a household with a maximum of two people. A good fifth of the referees and officials state that they have one or more children under the age of 14. Of these children, 40.8 % are also members of the same club for which (possibly) the activity as a referee is carried out.

2.7.5 Disabilities

In addition to questions about the family situation, the referees and officials were asked whether they had a disability. 5.6 % of the referees report a disability of less than 50 per cent and 3.8 % a disability of 50 per cent or more (severe disability). Consequently, 90.5 % of referees and officials do not have a disability. Compared to the entire German population, the proportion of severely disabled people among the referees and officials is below the national average, which amounted to 9.4 % or a total of around 7.8 million people in 2021 (Statistisches Bundesamt, 2022c).

2.7.6 Income

In addition, the referees and officials were asked about their personal monthly net income. Just under 14 % did not want to provide any information on income, which most frequently affects gender-diverse people. If one looks at those referees

and officials who provided information on their income, it becomes apparent that the referees and officials come from all income brackets. Around 46 % of the referees and officials stated that they had an average income of € 1,500 to € 3,500. More than every tenth referee earns a monthly net income of more than € 4,500, whereby this proportionately applies most frequently to men (cf. Tab. 30).

Tab. 30: Monthly net income of the referees and officials.

Euro	total	male	female	diverse
	Share (in %)			
up to 500	2.4	2.1	3.1	24.1
501 - 1,500	10.0	6.9	17.6	10.1
1,501 - 2,500	22.1	19.5	28.6	0.0
2,501 - 3,500	23.7	26.0	18.2	34.8
3,501 - 4,500	16.4	18.8	10.7	2.8
over 4,500	11.5	13.6	6.5	0.0
no information	13.8	13.1	15.2	28.2

2.8 Current life situation

There are frequent statements that sport has special effects. The referees and officials, like the coaches, trainers, and board members, were asked about their current life situation. Regarding their sporting activities, it is evident that the referees and officials are very active in sports. 77.5 % of the referees and officials state that they do sports every week. This amount is well above the national average. The Socio-Economic Panel (SOEP) for 2019¹² shows that, on average, 53.1 % of the population stated that they were physically active every week. Furthermore, 8.8 % of the referees and officials do sports every month (SOEP: 4.7 %) and 11.8 % less than once a month (SOEP: 13.0%). In contrast, only 2 % of the referees and officials state that they never do any sport, while the national average is 29.2 %.

¹² More recent SOEP values are not available here.

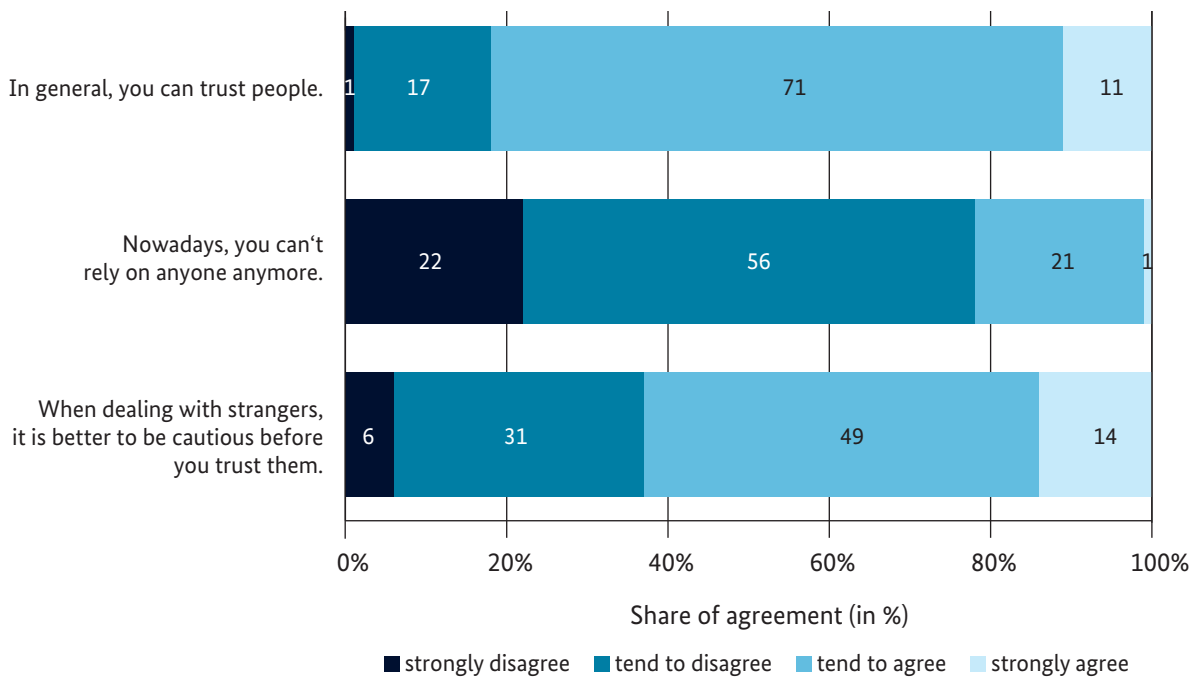


Fig. 33: Agreement of the referees and officials to trust in other people (1="strongly disagree" to 4="strongly agree").

With regard to social relationships, it is evident that the referees have strong social networks. The referees state that they have an average of six close friends. This is higher than the German average, which according to the SOEP analysis for 2020 is a good four close friendships.

The strong networking of referees and officials is also reflected in a relatively high level of trust in other people. Around 82 % of the referees state that they have a general trust in people. In comparison, according to SOEP 2018¹³, it is just under 69 % of the total population. In addition, around 78 % reject the statement that you can no longer rely on anyone. In the general population, around 62 % disagree with this statement. A mixed picture emerges when dealing with strangers: Around 63 % of the referees and of-

officials are of the opinion that caution should be exercised when dealing with strangers (cf. Fig. 33). On average, across Germany, almost 88 % of the population share this opinion.

In addition to the social contacts, the referees and officials were asked about their general life satisfaction. On a scale from 0="not at all satisfied" to 10="extremely satisfied", the average life satisfaction of the referees and officials is $M=7.65$. Compared to the national average based on the SOEP 2020, the referees and officials are slightly more satisfied with their lives overall (SOEP: $M=7.59$). A look at the sports in which the referees and officials are active shows that referees and officials in ju-jitsu, dance sport and triathlon are, on average, the most satisfied with their lives (cf. Tab. 31).

13 More recent SOEP values are not available here.

Tab. 31: Life satisfaction of the referees and officials, by sport (0=“not at all satisfied” to 10=“extremely satisfied”).

Sport	Mean
TOTAL	7.65
Badminton	7.68
Cheerleading	6.13
Soccer	7.57
Judo	7.50
Ju-Jitsu	8.23
Canoe	7.58
Athletics	7.80
Motorsports	7.60
Rescue sport	7.55
Rowing	7.69
Sailing	7.69
Taekwondo	7.62
Dancing	8.03
Tennis	7.78
Table tennis	7.66
Triathlon	7.95
Gymnastics	7.78

3 Conclusion



The referee survey aimed to broaden the perspective of the Sport Development Report as a survey of people, which was originally purely an organisational survey, and in this way to provide even more effective knowledge for controlling organised sport (knowledge of action) and for evaluating its function for the common good (knowledge of argumentation) (cf. Introduction). The control and support needs of referees and officials are particularly evident from the model of viable sports organisations (see Fig. 34).

Referees and officials are internal resource providers of sports clubs and associations who do their work voluntarily. In order to maintain the commitment and, if necessary, increase its quality (and thus make the sports organisation more viable), it is essential to understand why referees and officials invest their time and

knowledge, but also material resources for their work (investment logic), and how satisfied they are with their investments (target achievement logic). If investment goals are not achieved and there is an expectation that alternative investments in other activities will bring greater benefits, there is a high probability that the engagement as a referee will be terminated (utility maximization logic).

With the differentiated analyses of motives, satisfaction, but also limitations, compensation and insults, this report gives numerous hints for controlling and supporting referees and officials in Germany - and thus the viability of the entire sports organisation. Motives and effects of the commitment also make it clear that referee commitment is, in almost every case, also a commitment to the common good.

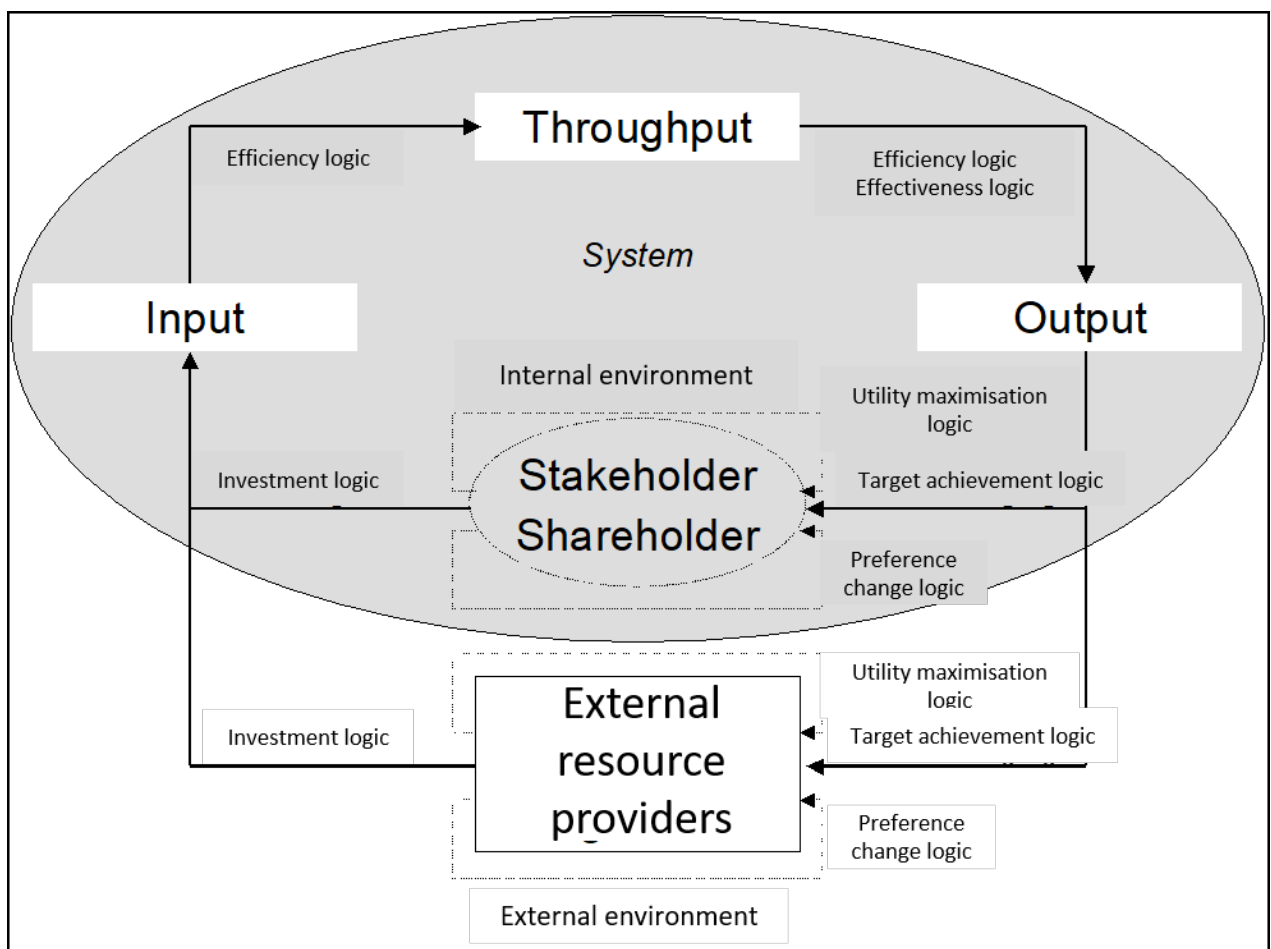


Fig. 34: Model of viable organizations.

As far as governance and support approaches for refereeing are concerned, the report makes it very clear that a „one size fits all“ approach is likely to have limited effectiveness. Rather, the results show how complex and multi-layered the nature of referees and officials in Germany and the people involved are. More effective improvements in results should therefore be possible in organized sports in

particular if the sport-specific, but also the age- and gender-specific characteristics concerning the logic of investment and the logic of target achievement are taken into account. Due to the great importance of referees and officials for sport and society, it is to be hoped that as many of the findings presented as possible will lead to differentiated support strategies in the associations.

4 Method



4.1 Background

The Sport Development Reports – “Analyses of the Situation of Sports Clubs in Germany” represent a further development of the Financial and Structural Analyses of German Sport (FI-SAS) with the aim of providing decision-makers in organised sport as well as in public sports policy and administration with timely information relevant to policy fields and management (argumentation and know-how). This support is intended to strengthen the competitiveness of organised sport in times of dynamic social change. The project is financed by the 16 federal state sports confederations, the German Olympic Sports Confederation (DOSB) and the Federal Institute for Sports Science (BISp)¹⁴.

In mid-2017, Univ.-Prof. Dr. Christoph Breuer from the Institute of Sport Economics and Sport Management at the German Sport University Cologne was commissioned to carry out the seventh to ninth wave of the Sport Development Report (“SDR 3.0”). The methodical core concept of the Sport Development Report is still the development of a panel design. Therefore, starting with the seventh wave, the same sports clubs will be surveyed online about their situation every three years. Furthermore, new elements of the “SDR 3.0” are the so-called stakeholder surveys, i.e. surveys of different groups of people. In this context, the seventh wave of the survey also surveys coaches and trainers as well as board members in addition to the clubs. In the following eighth wave, another two groups of people will be surveyed, namely members and referees or officials. The individual stakeholder surveys will be carried out in waves seven to nine after the respective surveys of the clubs.

4.2 Procedure for the referee survey

In the seventh wave of the Sport Development Report, not only the sports clubs themselves, i.e.

the meso level, but also coaches and trainers as well as board members were surveyed for the first time, i.e. the micro level was integrated. In the present eighth wave, club members, referees, and officials were also asked about the clubs. This extension has made it possible to develop the previous pure organisational surveys into an extended system analysis.

Sports associations were involved in the survey of the referees and officials, and the project team involved them in contacting the referees and officials. In a first step, the professional associations were contacted via the DOSB and informed about the planned implementation of the individual survey. All professional associations had the opportunity to take part in the survey of referees and officials on a voluntary basis. The planned procedure was explained, and support was offered with regard to the text for the invitation of the referees and officials. The professional associations that decided to participate in the survey were asked when the survey started to forward an individual link for the respective association to their referees. In some cases, the links were distributed via the involvement of the state professional associations. This specific survey link, which contained an assigned ID for the association, was then used to assign the people to the various associations.

4.3 Measurement

The analysis of the groups of people, which are to be understood here as internal stakeholder groups of the clubs, is about the production of practical knowledge. The Sport Development Reports revealed a problem of attracting and retaining referees and officials that has risen above the waves. As part of the internal stakeholder surveys, the question of the conditions and determinants of attracting and retaining this group arises. In particular, constructs of satisfaction, motivation and future plans of the referees and officials (willingness to continue the work of

¹⁴ Reference number ZMVI4-081802/17-26.

the referees and officials) are used. To operationalise these constructs, proven scales such as the „motivation scale for sports volunteerism“, i.e. a scale for measuring the motives of volunteers (cf. Hoyer et al., 2008; Wang, 2004) and scales for measuring the „intention to continue“, i.e. the intention to continue the activity (Clary et al., 1998; Hoyer et al., 2008), as well as to satisfaction (Leipnitz, 2014) are applied.

In addition, there is also the question of the social significance and the contribution to the common good of the actions of the internal stakeholder groups, which is of central importance for the perspective of argumentation knowledge. This perspective is operationalised on the basis of various questions about the type, scope and time required for the activity, the target groups and socio-demographic information.

4.4 Representation

4.4.1 Sampling and response

Referees were contacted by their respective professional associations. For this purpose, all professional associations were contacted via the DOSB in the run-up to the survey in order to find out if they were interested in taking part in the survey of the referees and officials. A total of 18 professional associations have agreed to take part in the survey. These include: the Cheerleading and Cheerperformance Association Germany, the German Life Saving Association, the German Taekwondo Union, the German Triathlon Union, the German Badminton Association, the German Football Association, the German Judo Association, the German Ju-Jitsu Association, the German Canoe Association, the German Athletics Association, the German Motor Sport Association, the German Rowing Association, the German Sailing Association, the German Squash Association, the German Dance Sport Association, the German Tennis Association, the German Table Tennis Association and the German Gymnastics Federation.

On June 15, 2021, these professional associations received the individual survey link for forwarding and inviting their referees and officials to the survey. During the field time, the project team asked the professional associations to send a reminder to the referees and officials. This request was made on July 27, 2021, and led to an increased response. The survey of the referees and officials was completed on August 26th, 2021. A total of 7,391 referees and officials actively participated in the survey. The differentiated returns according to professional associations can be found in Tab. 32.

In order to be able to provide an assessment of the participation rates, the professional associations were asked in advance to provide information on the population of referees and officials in the respective sport and the (estimated) number of referees and officials who would be contacted for the survey. In some cases, the professional associations could provide precise information on this, but in some cases, only rough estimates were possible. Some associations were unable to provide any information. Therefore, the information on the overall population and the return in the individual sports should be understood as tendencies or orientations. Since information on the total number and the number of referees and officials contacted is not available for all participating professional associations or sports, no general response rate can be calculated.

4.4.2 Weighting

The number of referees involved from the different sports varied greatly. Soccer referees were the most strongly represented in absolute terms, while the absolute number of participants in other sports (e.g. cheerleading, ju-jitsu and taekwondo) was lower. To avoid bias in the evaluations based on stronger participation from one sport, all referees and judges from the different sports were weighted equally for the evaluations. For the weighted evaluations, the one case for squash was excluded from the analyses. The

Tab. 32: Participation of referees and officials, differentiated by professional association (n.a.=no information available).

Association	Population	Sample	Participation absolutely	Response (share of population in %)	Response (share of sample in %)
Cheerleading and Cheerperformance Association Germany	51	51	22	43.1	43.1
German Life-Saving Association	1,500	150	98	6.5	65.3
German Taekwondo Union	162	162	33	20.4	20.4
German Triathlon Union	1,000	1,000	211	21.1	21.1
German Badminton Association	n.a.	n.a.	71	n.a.	n.a.
German Football Association	51,884	n.a.	3,422	6.6	n.a.
German Judo Association	1,500	1,500	389	25.9	25.9
German Ju-Jitsu Association	200	50	26	13.0	52.0
German Canoe Association	n.a.	n.a.	81	n.a.	n.a.
German Athletics Association	20,100	14,070	1,292	6.4	9.2
German Motor Sport Association	n.a.	3,000	82	n.a.	2.7
German Rowing Association	210	210	109	51.9	51.9
German Sailing Association	n.a.	n.a.	159	n.a.	n.a.
German Squash Association	n.a.	n.a.	1	n.a.	n.a.
German Dance Sport Association	1,419	1,419	449	31.6	31.6
German Tennis Federation	2,000	250	199	10.0	79.6
German Table Tennis Association	2,160	2,160	479	22.2	22.2
German Gymnastics Federation	850	850	268	31.5	31.5
In total	-	-	7,391	-	-

Table 33: Calculation of the weighting factor.

Sport	Equilibrium distribution	Percentage of participants (in %)	weight factor
Soccer	5.88	46.31	0.13
Motorsports	5.88	1.11	5.30
Taekwondo	5.88	0.45	13.17
Canoe	5.88	1.10	5.37
Judo	5.88	5.26	1.12
Cheerleading	5.88	0.30	19.76
Ju-Jitsu	5.88	0.35	16.72
Rescue sport	5.88	1.33	4.44
Rowing	5.88	1.47	3.99
Dance Sport	5.88	6.08	0.97

Sport	Equilibrium distribution	Percentage of participants (in %)	weight factor
Tennis	5.88	2.69	2.18
Sailing	5.88	2.15	2.73
Gymnastics	5.88	3.63	1.62
Badminton	5.88	0.96	6.12
Athletics	5.88	17.48	0.34
Triathlon	5.88	2.86	2.06
Table tennis	5.88	6.48	0.91

weighting factor was then calculated based on the remaining 17 sports. For this purpose, the equivalent proportion of the 17 sports was first calculated ($100/17=5.88$). This proportion was set in relation to the respective proportion of referees and officials from the 17 sports involved. Accordingly, a weighting factor was calculated for each case (see Table 33), with which the data set was weighted for the final evaluation. This procedure leads to the same result as if the results (mean values) for the individual sports were divided by the number of sports.

In addition to the overall evaluations, the results are also differentiated according to the 17 sports. These sport-specific evaluations were carried out in the unweighted data set.

It should be noted that due to the equal weighting of the sports, which was carried out for this differentiated report, the results may differ slightly from the previously published results in the federal report (Breuer & Feiler, 2021).

4.4.3 Limitations

The procedure described above with regard to contacting and questioning the referees and officials had to be chosen because another type of contact was not possible due to data protection restrictions and a lack of a database. In this respect, no concrete statements can be made about the participation rate since the number of referees and officials contacted is not known.

4.5 Data evaluation

4.5.1 Tests for differences

In order to check whether there are statistically significant differences between different groups (e.g. between the sexes or age groups), t-tests and univariate analyses of variance (ANOVA) were used in the present report. In the figures and tables of this report, statistically significant differences are given the usual labelling (cf. Section 4.5.3).

If several groups are compared with each other (e.g. the age groups), the figures or tables indicate whether there are generally statistically significant differences between the groups. Exactly which groups differ from each other (e.g. the younger ones from the older ones) is explained at selected points in the text.

4.5.2 Analysis of relationships: correlation analysis

A correlation analysis is used to examine whether there is a connection between different variables, e.g. between the age of the respondents and the duration of the activity. The correlation coefficient r can be used to determine whether there is a positive or negative relationship between two variables. Here, r can assume values between -1 and $+1$, with an amount close to 1 representing a strong correlation and an amount close to 0 a weak correlation.

4.5.3 Error probabilities

A significance level of $\alpha = 0.05$ is set for all statistical tests in this report. The level of the error probability, which is decisive for determining the significance, is illustrated with the usual labelling (cf. Tab. 34). If the probability of error in the calculation is at most 5 %, the result is therefore a significant one.

Tab. 34: Overview of error probabilities in statistical calculations and their identification.

symbol	meaning
*	significant, i.e. error probability of the calculation is equal to/less than 5 %
**	very significant, i.e. probability of error in the calculation is equal to/less than 1 %
***	highly significant, i.e. probability of error in the calculation is equal to/less than 0.1 %

4.5.4 Factor analysis

In the chapter on the motivation of referees and officials (cf. Section 2.3.2), the individual items queried (a total of 32 items) are reduced or summarised into categories of motives that are coherent in terms of content, using the statistical method of factor analysis (factor extraction according to main component analysis with varimax rotation). The factor analysis serves to make the high degree of complexity, which arises from the query of a large number of variables (items), easier to interpret by summarizing them into a few so-called factors. The factor analysis recognizes groups of variables that capture similar information (for a detailed description of the procedure, see Backhaus, Erichson, Plinke & Weiber, 2018). In the present case, the 32 items are reduced to eight factors. The eight extracted factors were tested for reliability using Cronbach's Alpha.

5 Literature



- Antidiskriminierungsstelle (2022). *Jahresbericht 2021. Gleiche Rechte, gleiche Chancen. Jahresbericht der Antidiskriminierungsstelle des Bundes*. Berlin: Antidiskriminierungsstelle des Bundes.
- Backhaus, K., Erichson, B., Plinke, W. & Weiber, R. (2018). *Multivariate Analysemethoden. Eine anwendungsorientierte Einführung* (15., vollständig überarbeitete Auflage). Berlin Heidelberg: Springer.
- Braun, S. (2003). Zwischen Gemeinschaftsorientierung und Selbstverwirklichung. Motive zu freiwilligem Engagement. In J. Baur & S. Braun (Hrsg.), *Integrationsleistungen von Sportvereinen als Freiwilligenorganisationen* (S. 242-267). Aachen: Meyer & Meyer.
- Braun, S. (2011). *Ehrenamtliches und freiwilliges Engagement im Sport. Sportbezogene Sonderauswertung des Freiwilligensurveys von 1999, 2004 und 2009*. Köln: Sportverlag Strauß.
- Braun, S., Sielschott, S. & Burrmann, U. (2022). *Ehrenamtliches und freiwilliges Engagement im Sport. Sportbezogene Sonderauswertung der „Deutschen Freiwilligensurveys“ von 2014 bis 2019*. Bonn: Bundesinstitut für Sportwissenschaft.
- Breuer, C. (2007). Theoretischer Hintergrund: Produktion von Handlungs- und Legitimationswissen. In C. Breuer (Hrsg.), *Sportentwicklungsbericht 2005/2006. Analyse zur Situation der Sportvereine in Deutschland* (S. 634-640). Köln: Sportverlag Strauß.
- Breuer, C. & Feiler, S. (2017a). Sportvereine in Deutschland - Ein Überblick. In C. Breuer (Hrsg.), *Sportentwicklungsbericht 2015/2016. Band I. Analyse zur Situation der Sportvereine in Deutschland* (S. 15-46). Hellenthal: Sportverlag Strauß.
- Breuer, C. & Feiler, S. (2017b). Sportverein im Wandel - Zur Entwicklung der Sportvereine in Deutschland von 2005 bis 2015. In C. Breuer (Hrsg.), *Sportentwicklungsbericht 2015/2016. Band I. Analyse zur Situation der Sportvereine in Deutschland* (S. 243-263). Hellenthal: Sportverlag Strauß.
- Breuer, C. & Feiler, S. (2020a). *TrainerInnen und ÜbungsleiterInnen in Sportvereinen in Deutschland. Sportentwicklungsbericht für Deutschland 2017/2018 - Teil 2*. Bundesinstitut für Sportwissenschaft.
- Breuer, C. & Feiler, S. (2020b). *Vorstandsmitglieder in Sportvereinen in Deutschland. Sportentwicklungsbericht für Deutschland 2017/2018 - Teil 3*. Bundesinstitut für Sportwissenschaft.
- Breuer, C. & Feiler, S. (2021). *Sportvereine in Deutschland: Ergebnisse aus der 8. Welle des Sportentwicklungsberichts. Sportentwicklungsbericht für Deutschland 2020-2022 - Teil 1*. Bonn: Bundesinstitut für Sportwissenschaft.
- Breuer, C. & Giel, T. (2017). Kampf- und Schiedsrichter in Deutschland. In C. Breuer (Hrsg.), *Sportentwicklungsbericht 2015/2016 - Band II. Weiterführende Strukturanalysen* (S. 406-440). Hellenthal: Sportverlag Strauß.
- Clary, G. E., Snyder, M., Ridge, R. D., Copeland, J., Stukas, A. A., Haugen, J. & Miene, P. (1998). Understanding and Assessing the Motivations of Volunteers: A Functional Approach. *Journal of Personality and Social Psychology*, 74(6), 1516-1530.
- Hoye, R., Cuskelly, G., Taylor, T. & Darcy, S. (2008). Volunteer motives and retention in community sport. A study of Australian rugby clubs. *Australian Journal on Volunteering*, 13(2), 41-48.
- Leipnitz, S. (2014). Stakeholder Performance Measurement in Nonprofit Organizations. *Nonprofit Management and Leadership*, 25(2), 165-181.
- Statistisches Bundesamt (2021). Bevölkerungsstand. Bevölkerung nach Nationalität und Geschlecht (Quartalszahlen). Abgerufen am 01.08.2022 unter <https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Bevoelkerungsstand/Tabellen/liste-zensus-geschlecht-staatsangehoerigkeit.html>

- Statistisches Bundesamt (2022a). Bevölkerung Deutschlands im Jahr 2021 leicht gewachsen. Pressemitteilung Nr. 251 vom 20. Juni 2022. Abgerufen am 01.08.2022 unter https://www.destatis.de/DE/Presse/Pressemitteilungen/2022/06/PD22_251_12411.html
- Statistisches Bundesamt (2022b). Gut jede vierte Person in Deutschland hatte 2021 einen Migrationshintergrund. Pressemitteilung Nr. 162 vom 12. April 2022. Abgerufen am 01.08.2022 unter https://www.destatis.de/DE/Presse/Pressemitteilungen/2022/04/PD22_162_125.html
- Statistisches Bundesamt (2022c). 7,8 Millionen schwerbehinderte Menschen leben in Deutschland. Pressemitteilung Nr. 259 vom 22. Juni 2022. Abgerufen am 17.08.2022 unter https://www.destatis.de/DE/Presse/Pressemitteilungen/2022/06/PD22_259_227.html;jsessionid=5284D6D97C1ADDAD14CE66C93FA6DD6F.live741
- Wang, P. Z. (2004). Assessing motivations for sports volunteerism. *Advances in Consumer Research*, 31, 420-425.

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Motivation and satisfaction tables, detailed by sport

Tab. 35: Motives of the referees and officials for carrying out their activity, by sport
(1=“do not agree at all” to 7=“agree completely”; part 1).

I carry out my activities as a referee/official, ...	Badminton	Cheerleading	Soccer	Judo	Ju-Jitsu	Canoe	Athletics	Motorsports	Rescue sport
out of solidarity with the sport	6.32	6.73	6.23	6.52	6.73	6.47	6.31	6.70	6.48
because it is fun	6.25	6.53	6.41	6.37	6.86	6.05	6.33	6.69	6.52
because in my spare time I would like to get involved in something that makes sense to me personally	5.95	5.87	5.89	5.97	6.00	6.28	6.05	6.10	6.03
because it makes me feel good	5.79	6.47	6.11	5.90	6.50	5.79	5.93	6.25	6.28
because I enjoy helping other people	5.80	6.00	5.63	5.95	6.26	5.96	6.07	6.04	6.30
because I consider myself to be a person who gets involved	5.84	6.13	5.72	5.96	6.09	6.02	5.89	5.69	6.25
because of my personal values and beliefs	5.58	6.00	5.61	5.92	6.04	5.98	5.83	5.78	5.86
to develop personally	5.63	6.27	5.83	5.91	5.87	5.16	4.88	5.35	5.68
to gain experience	5.50	6.20	5.58	5.66	5.65	5.11	4.97	5.59	5.92
to share my knowledge and skills with others	5.20	6.13	5.10	5.48	5.70	5.54	5.00	5.88	5.59
because my commitment does something good for the community	5.33	4.73	5.43	5.40	5.39	5.61	5.73	4.88	5.57
out of solidarity with the club	4.96	6.00	4.64	5.21	5.85	5.68	5.20	5.45	6.07
because I want to do something for our club community	4.75	6.25	4.57	5.25	6.00	5.60	5.19	5.68	6.06
because I enjoy being a part of the club	4.61	6.00	4.75	5.38	5.54	5.46	5.05	5.36	5.85
to get involved in the club life	4.66	6.25	4.36	5.06	6.00	5.44	4.98	5.50	5.76
because my work is a community service	4.87	4.07	4.89	4.98	5.14	5.40	5.35	4.67	5.08
because I am making a valuable contribution to the community	4.87	4.27	5.01	4.92	5.50	5.40	5.32	4.56	5.01
to get to know people interested in the same things I am	5.20	5.20	4.82	4.99	4.91	4.95	4.68	5.55	5.53
to challenge myself and test my skills	5.25	5.87	5.55	5.35	4.65	4.35	4.22	4.75	4.97
because I have an obligation to help others	4.65	4.07	4.34	4.65	5.09	5.34	5.07	4.94	4.82
because I am learning things that I can apply to other areas	4.81	5.00	5.39	4.96	4.35	4.43	4.20	4.73	4.79
because I believe in promoting the commitment of referees/ officials for the good of society	4.57	4.07	4.72	4.76	4.91	4.98	4.85	4.33	4.56
because people who are close to me support this	4.21	2.93	4.23	4.43	4.50	5.09	4.51	4.29	4.68
because I want to be successful in sports	4.00	5.67	4.94	4.45	4.23	4.00	3.21	3.38	3.92
because my work is important for the people I know best	3.52	3.67	3.62	3.87	4.29	4.89	4.08	3.94	4.20
to find recognition	4.32	4.27	4.03	4.20	3.91	3.77	3.46	3.50	3.97

	Badminton	Cheerleading	Soccer	Judo	Ju-Jitsu	Canoe	Athletics	Motorsports	Rescue sport
I carry out my activities as a referee/official, ...									
because my family encourages me to be a referee/official	3.70	2.40	3.91	3.76	3.73	3.84	3.89	3.75	4.03
to gain social prestige	3.92	3.60	3.80	3.83	3.77	3.28	3.14	3.08	3.27
because the activity benefits something for my current or future professional opportunities	3.77	3.27	4.38	3.37	2.96	3.02	2.81	3.55	3.45
because I get paid for it	2.19	3.80	3.33	2.47	3.14	1.77	1.74	1.63	1.32
because I get sportswear provided	1.59	1.47	2.69	1.37	1.86	1.37	1.66	1.50	1.58
because I have to pay less fee in the club	2.00	2.50	2.24	1.47	1.69	1.22	1.39	1.68	1.13

Tab. 36: Motives of the referees and officials for carrying out their activity, by sport
(1=“do not agree at all” to 7=“agree completely”; part 2).

	Rowing	Sailing	Taekwondo	Dancing	Tennis	Table tennis	Triathlon	Gymnastics
I carry out my activities as a referee/official, ...								
out of solidarity with the sport	6.48	6.43	6.62	6.74	6.32	6.18	6.27	6.48
because it is fun	6.43	6.27	6.31	6.59	6.27	6.08	6.36	5.63
because in my spare time I would like to get involved in something that makes sense to me personally	6.17	6.09	6.27	6.20	5.63	5.64	6.01	5.46
because it makes me feel good	6.12	5.75	6.12	6.01	5.70	5.60	5.90	5.28
because I enjoy helping other people	5.92	5.86	6.19	5.90	5.75	5.61	5.96	5.63
because I consider myself to be a person who gets involved	6.10	5.78	5.96	5.88	5.94	5.75	5.90	5.66
because of my personal values and beliefs	6.19	5.73	6.31	6.15	5.56	5.61	5.79	5.34
to develop personally	5.01	5.43	6.19	5.64	5.45	5.23	5.41	4.89
to gain experience	4.97	5.47	5.81	5.49	5.35	5.24	5.35	4.88
to share my knowledge and skills with others	5.15	5.35	5.77	5.67	5.22	5.27	5.22	4.80
because my commitment does something good for the community	5.79	5.21	5.73	5.45	5.06	5.26	5.54	5.26
out of solidarity with the club	4.95	5.34	5.36	4.85	5.28	4.80	5.14	5.49
because I want to do something for our club community	4.95	5.45	5.29	4.71	5.26	4.82	5.22	5.20
because I enjoy being a part of the club	4.92	4.81	5.29	4.89	5.15	4.67	4.65	5.11
to get involved in the club life	4.80	5.15	5.36	4.61	4.90	4.55	4.83	5.02
because my work is a community service	5.52	4.78	5.38	4.92	4.40	4.92	5.24	4.88
because I am making a valuable contribution to the community	5.49	4.68	5.31	4.94	4.35	4.78	5.17	4.83
to get to know people interested in the same things I am	4.91	4.85	5.58	4.78	4.79	4.78	4.64	4.06
to challenge myself and test my skills	4.14	4.97	5.54	4.96	4.85	4.60	4.56	4.31

I carry out my activities as a referee/official, ...	Rowing	Sailing	Taekwondo	Dancing	Tennis	Table tennis	Triathlon	Gymnastics
because I have an obligation to help others	4.99	4.93	5.27	5.05	4.40	4.58	4.98	5.07
because I am learning things that I can apply to other areas	4.63	4.41	5.35	4.78	4.94	4.61	4.63	4.16
because I believe in promoting the commitment of referees/ officials for the good of society	4.95	4.41	5.19	4.65	4.32	4.62	4.90	4.45
because people who are close to me support this	4.07	4.07	5.00	4.13	4.06	3.74	4.08	4.37
because I want to be successful in sports	2.80	3.60	5.00	4.01	4.14	3.67	3.18	3.85
because my work is important to the people I know best	3.64	3.82	4.50	3.68	3.45	3.37	3.62	4.28
to find recognition	3.64	3.71	3.35	3.83	3.78	3.47	3.56	3.41
because my family encourages me to be a referee/official	3.67	3.78	4.38	3.78	3.95	3.31	3.38	3.28
to gain social prestige	3.28	3.34	2.92	3.48	3.58	3.26	3.33	2.92
because the activity benefits something for my current or future professional opportunities	3.01	3.00	3.54	3.33	3.70	2.94	2.98	2.74
because I get paid for it	1.31	1.27	2.23	1.89	3.58	2.07	1.91	1.65
because I get sportswear provided	1.14	1.48	1.38	1.19	1.91	1.47	1.59	1.25
because I have to pay less fee in the club	1.21	1.25	1.14	1.32	1.76	1.63	1.44	1.28

Tab. 37: Referee satisfaction with individual aspects of of the activity, by sport
(0=“not at all satisfied” to 10=“extremely satisfied”; part 1).

Satisfaction with...	Badminton	Cheerleading	Soccer	Judo	Ju-Jitsu	Canoe	Athletics	Motorsports	Rescue sport
my performance as a referee/ official	8.20	8.47	7.57	7.60	7.88	8.03	8.06	8.34	8.03
the respect of the athletes towards me	7.86	8.24	6.24	8.03	8.20	7.82	8.47	7.84	8.21
the cooperation with other referees/ officials	7.97	8.33	7.29	8.24	8.25	8.32	7.95	7.98	8.08
the appreciation of the activity by family and friends	7.45	6.35	7.73	7.34	7.72	7.34	7.47	7.29	7.32
the respect of the trainers towards me	7.32	8.00	6.05	6.72	7.16	7.61	7.34	7.41	7.54
the respect of the spectators towards me	7.20	7.71	4.69	6.95	6.72	7.74	7.67	6.84	7.75
the cooperation within the club	6.79	9.00	6.21	7.58	7.75	7.51	7.38	8.18	8.08
the appreciation of the activity by the members of my club	6.62	9.50	7.01	7.54	7.93	7.00	7.46	8.38	7.25
the appreciation of the activity by the athletes	6.72	7.12	6.08	6.79	6.80	6.88	7.69	7.05	7.27
the effort for the report of the referee or official to the association	7.33	7.80	6.33	6.90	7.21	6.79	6.38	6.04	6.83
the further qualification and training opportunities	6.05	7.20	6.57	6.95	6.88	6.52	6.51	6.50	6.47
my physical fitness	6.45	6.29	6.57	6.83	6.60	6.85	7.47	6.45	6.85

Satisfaction with...	Badminton	Cheerleading	Soccer	Judo	Ju-Jitsu	Canoe	Athletics	Motorsports	Rescue sport
the compatibility with the occupation	6.91	7.67	7.07	6.48	6.79	5.59	6.72	6.06	6.46
the professional support of the activity by the association	6.22	8.36	6.08	7.11	7.39	6.60	6.38	5.26	7.20
the appreciation of the activity as a whole	6.02	7.00	5.94	6.40	6.40	6.70	6.82	6.76	6.73
the condition of the sports facilities on or in which I am active	6.79	6.33	6.30	6.54	6.46	6.79	6.03	6.58	6.45
the flexible choice of operating times	6.91	7.07	6.92	6.49	5.91	6.52	6.84	5.64	6.18
the compatibility with family and friends	6.86	7.27	6.55	5.83	6.71	5.98	6.50	6.10	6.50
the equipment with sports devices/sports material	6.51	5.67	6.22	6.53	6.96	6.43	5.97	6.15	6.52
the effort of reimbursement	6.54	7.47	6.50	6.98	6.88	5.95	6.17	5.75	5.99
the provision of appropriate teaching and learning materials	5.98	7.67	6.52	6.66	5.87	6.13	6.11	5.40	6.03
support for administrative activities	6.31	6.50	5.88	6.48	6.92	6.22	6.13	6.10	6.71
the openness to criticism and suggestions for changes in the club	5.79	9.25	5.79	6.69	5.93	6.23	6.50	6.82	6.85
the liability risk/ the protection through insurance	5.98	7.67	5.87	6.66	6.67	5.93	6.06	5.00	6.92
the social reputation of referees/ officials	5.06	6.13	5.39	5.88	6.28	5.90	5.84	6.25	5.65
the openness to criticism and suggestions for changes in the association	5.35	8.40	4.83	5.83	6.00	6.39	5.84	4.10	6.50
the condition of the referee/officials rooms	5.88	6.53	4.79	5.52	5.09	5.95	5.21	5.83	5.49
the professional support of the activity by the club	5.13	7.25	5.10	6.34	5.92	6.08	6.06	6.86	7.07
the support of new ideas	5.62	9.50	5.20	5.85	6.23	6.26	5.82	5.41	5.99
the appreciation of the activity in the form of certificates, passes or similar	4.52	4.24	5.43	4.95	4.88	5.30	5.54	4.64	5.17
the appreciation of the activity in the form of honours and the like	4.66	3.53	5.32	4.90	4.75	5.20	5.45	4.74	4.63
the financial remuneration for the work carried out	3.15	5.29	4.59	4.28	5.36	3.65	4.38	4.05	3.54
tax benefits	2.56	2.63	3.28	3.03	4.04	2.82	3.15	1.54	2.46

Tab. 38: Referee satisfaction with individual aspects of the activity, by sport
(0=“not at all satisfied” to 10=“extremely satisfied”; part 2).

Satisfaction with...	Rowing	Sailing	Taekwondo	Dancing	Tennis	Table tennis	Triathlon	Gymnastics
my performance as a referee/official	8.26	7.93	8.07	8.46	8.04	8.06	8.18	7.60
the respect of the athletes towards me	8.26	8.09	8.33	8.32	7.60	7.89	7.88	8.57
the cooperation with other referees/ officials	8.53	7.78	8.30	7.25	6.86	7.88	8.29	7.27
the appreciation of the activity by family and friends	7.70	7.63	7.15	7.99	7.73	7.12	7.45	6.72

Satisfaction with...	Rowing	Sailing	Taekwondo	Dancing	Tennis	Table tennis	Triathlon	Gymnastics
the respect of the trainers towards me	7.40	7.53	7.59	7.57	7.59	7.36	7.47	7.59
the respect of the spectators towards me	8.38	7.83	7.48	7.64	7.58	7.44	7.39	7.60
the cooperation within the club	7.10	7.12	7.36	7.34	6.79	6.88	7.30	7.44
the appreciation of the activity by the members of my club	6.60	6.77	7.36	7.79	7.27	6.83	7.49	6.87
the appreciation of the activity by the athlete	7.32	7.32	7.08	7.60	6.93	6.91	7.52	7.15
the effort for the report of the referee or official to the association	7.96	6.71	7.15	7.62	7.01	6.56	6.90	6.33
the further qualification and training opportunities	6.98	6.39	7.70	7.71	6.93	6.95	7.68	6.57
my physical fitness	6.47	6.36	7.19	7.45	6.94	6.79	7.74	7.00
the compatibility with the occupation	6.98	6.04	6.74	8.02	6.58	7.50	7.84	6.21
the professional support of the activity by the association	6.93	6.00	7.70	6.65	6.71	6.65	7.57	6.07
the appreciation of the activity as a whole	7.10	6.64	7.11	7.38	6.48	6.10	7.39	6.20
the condition of the sports facilities on or in which I am active	6.84	6.81	6.74	6.79	7.27	7.18	7.19	5.86
the flexible choice of operating times	7.48	5.87	6.26	7.26	6.58	6.81	7.77	5.00
the compatibility with family and friends	6.75	6.06	6.11	7.38	6.25	6.79	7.24	5.68
the equipment with sports devices/sports material	6.45	6.24	6.48	6.75	6.66	7.10	6.93	6.19
the effort of reimbursement	6.76	4.68	6.44	6.81	6.49	6.36	7.22	5.21
the provision of appropriate teaching and learning materials	6.03	5.45	7.59	6.44	6.38	6.36	7.30	6.09
support of administrative activities	6.69	5.72	6.21	6.73	5.76	6.14	6.76	5.97
the openness to criticism and suggestions for changes in the club	6.11	5.75	6.85	6.24	5.83	6.17	6.70	6.29
the liability risk/ the protection through insurance	5.40	5.75	6.00	7.05	5.41	6.41	7.14	5.84
the social reputation of referees/ officials	6.55	6.13	6.07	6.91	6.09	5.60	6.47	5.75
the openness to criticism and suggestions for changes in the association	6.18	4.83	6.74	5.03	5.42	5.75	6.84	5.59
the condition of the referee/officials rooms	6.59	6.18	5.78	6.61	6.26	6.22	6.44	5.34
the professional support of the activity by the club	5.30	5.49	6.23	5.96	5.24	5.20	5.94	5.81
the support of new ideas	6.17	5.54	5.79	5.14	5.41	5.56	6.47	5.54
the appreciation of the activity in the form of certificates, passes or similar	4.59	4.88	6.77	5.15	5.27	5.45	5.44	4.65
the appreciation of the activity in the form of honours and the like	4.82	4.62	5.78	5.14	4.34	5.60	5.53	4.36
the financial remuneration for the work carried out	3.93	2.98	4.07	4.02	4.52	3.26	6.02	2.57
tax benefits	2.71	2.14	2.33	2.65	2.93	2.52	3.98	2.20

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